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VOLUME XLIX

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NUMBER 3

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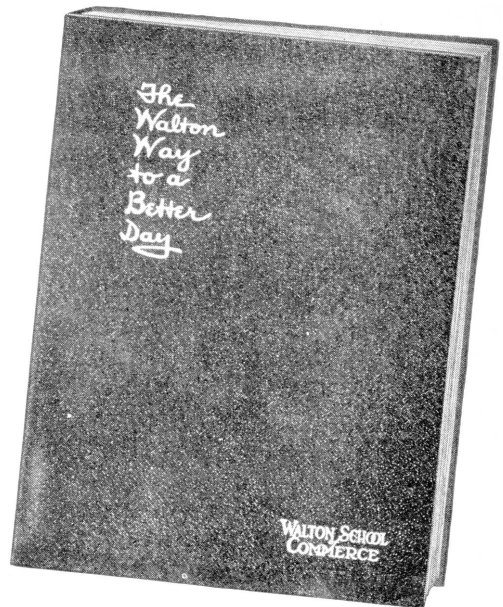
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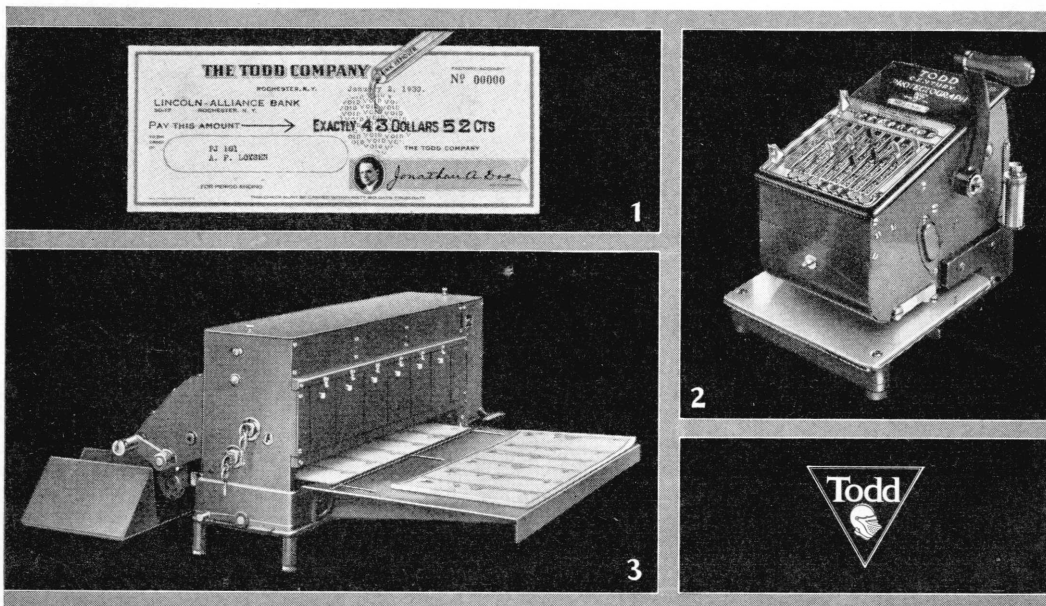
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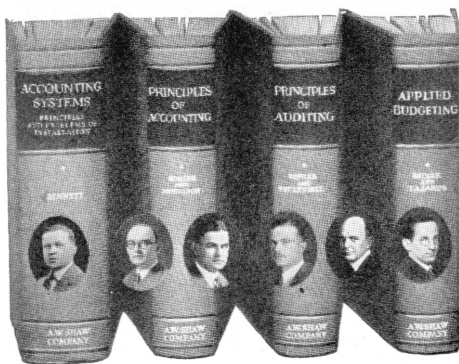
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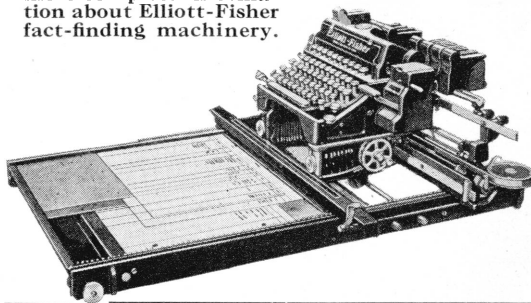
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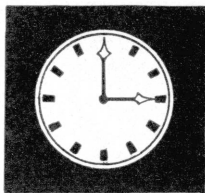
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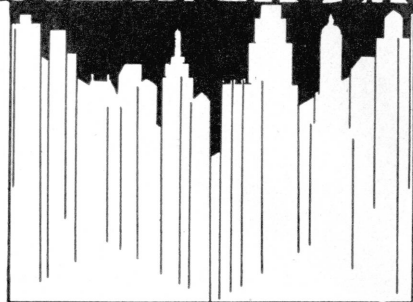
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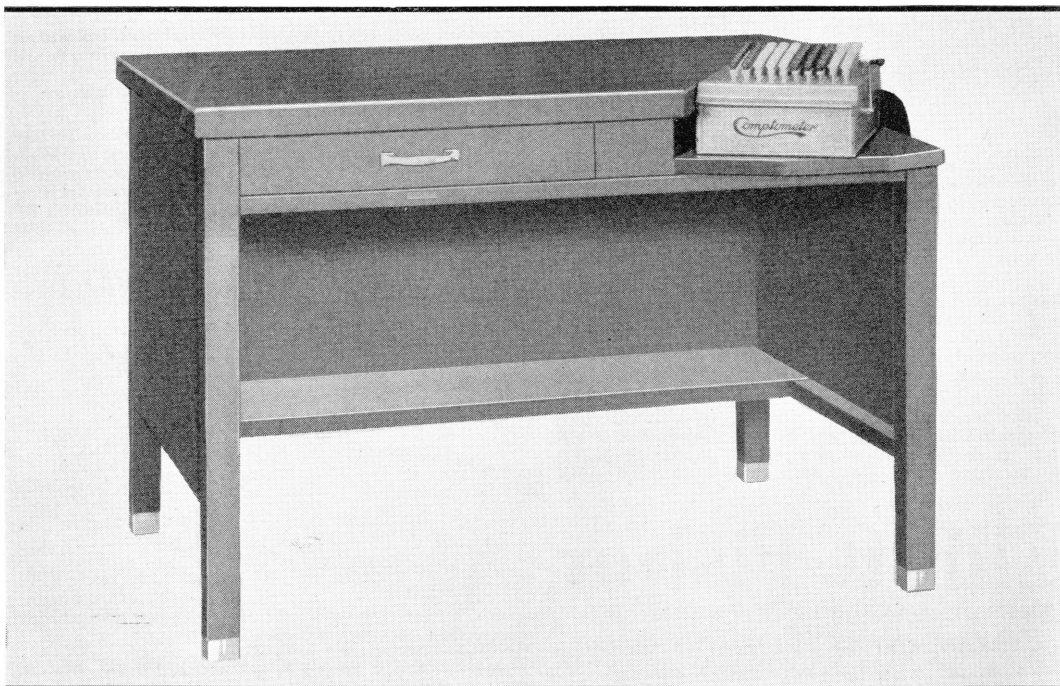
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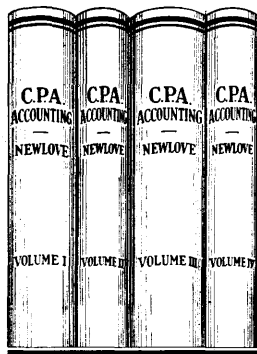
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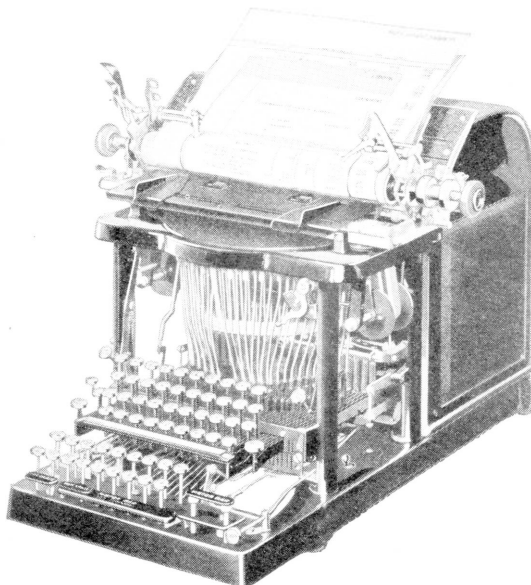
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Vol. 49

MARCH, 1930

No. 3

EDITORIAL

Obsolescence of Goodwill

It is to be hoped that we shall not be suspected of introducing a highly controversial question of national importance into the columns of a technical journal if we discuss a recent decision of the supreme court of the United States in the case of the *Haberle Crystal Springs Brewing Company*; nor, we trust, shall we be charged with a refusal to accept the decisions of the court or with a lack of respect for its members if, in the course of discussion, we question the validity of the arguments by which the decision is supported in the opinion handed down. The case is interesting to accountants in more ways than one. The point at issue—whether under the tax law an allowance should be made for obsolescence of goodwill—is itself an interesting technical question. The decisions in the courts below turned largely on the legislative history of tax provisions, which accountants played an important part in formulating, and the whole history of the case indicates the strange turns of fortune to which taxpayers may be subject. We propose, therefore, to consider it in some detail.

History of the Case

Let us deal first with the proceedings in the supreme court. As has been said, the question at issue was whether or not under the revenue act of 1918 an allowance could be made for the obsolescence of goodwill. No question of fact was in dispute. In the language of the opinion, "The goodwill was that of a brewery and is found to have been destroyed by prohibition legislation. The deduction claimed is for the fiscal year ending May 31, 1919, it having been apparent early in 1918 that prohibition was im-

minent, and the officers having taken steps to prepare for the total or partial liquidation of the company. The amount of the deduction to be made is agreed upon if any deduction is to be allowed." The sole contention of the government, which brought the appeal, was that in the provisions of the revenue act of 1918 relating to exhaustion, wear and tear and obsolescence, "the statute only intended to embrace property of such a nature that it was decreased, consumed or disposed of by use in the trade or business, and goodwill is not such property."

**The Intent of
the Law**

As between the parties, nothing turned on the nature of the event which destroyed the goodwill. The government's position would have been precisely the same had the case been one of a business brought to an end by an unexpected exhaustion of the world's supply of its raw material. The court, however, decided against the taxpayer, on the ground that neither of the words "exhaustion" and "obsolescence" was apt to describe termination by law as an evil of a business otherwise flourishing; and that to make such an allowance would be to grant part compensation to the taxpayer for the extinguishment of his business by law, in the form of "an abatement of taxes otherwise due," and that it was incredible that congress should have intended such a result. But it is difficult to perceive how any question arises of abatement of taxes otherwise due. The profits for the last years of the company's operation had to be determined and taxed. The fact, conceded on the record, that the useful life of the capital assets of the business was to be cut short, was claimed to be under general provisions a factor which would reduce the taxable income and the tax. The revenue act did not exclude breweries from the benefit of these provisions. The taxpayer had been guilty of nothing illegal. Upon what theory, then, can the taxpayer be denied the benefit of the provisions and its tax increased by such denial? If the general provisions would not give the relief sought, if the premature termination of the useful life of an asset employed in a business which is brought to an unexpected end is not covered by the terms used in the act, the taxpayer has no right to succeed. But if they would afford that relief, there is nothing in the revenue act, nor surely in considerations of public policy, to deprive the taxpayer of the benefit on account of the nature of the event which brought the business to a

premature end. Congress, acting within its powers, saw fit to enact prohibition without compensation; but there is nothing to suggest that it intended to impose an added burden on the industries affected by requiring that their taxable income, during the short period of legal operation left them, should, by an exception to a general rule, be determined as if that period had been unlimited. The opinion, we think, does an injustice to congress when it imputes to congress such an intention.

**Applicability to Case
of Breweries**

Mr. Justice McReynolds and Mr. Justice Stone concurred in the result, but wrote no opinion. Their decision probably turned on the question of the applicability of the clause relied upon to goodwill in general, rather than on the interpretation of the attitude of congress toward a business which had become noxious to the constitution, which led to the rather summary dismissal of the taxpayers' contentions by Mr. Justice Holmes. The only words in his opinion which seem to bear directly on this question are contained in the sentence: "Neither word is apt to describe termination by law as an evil of a business otherwise flourishing, and neither becomes more applicable because the death is lingering rather than instantaneous." It may be that if the effect of the decision as an authority comes to be considered in a future case, the declaration that neither word [exhaustion or obsolescence] is apt to describe the termination of a business otherwise flourishing will be held to have been the basis of the decision, and the references to the prohibition law to have been merely obiter dicta. Accurately speaking, the question is perhaps whether either "exhaustion" or "obsolescence" is or is not an apt term to describe the effect on capital assets of an event which is about to bring a prosperous business in which they are employed to an unexpected end, rather than whether the words are apt to describe the event itself or not. In considering such a question, an examination of the history of the legislation and of the practice of the treasury would seem, under the decisions of the court, to be pertinent if not essential.

**A Question
of Tense**

In the bureau of internal revenue and in the court below, the question had turned on the interpretation of the provision of section 234 (a) of the revenue act of 1918, allowing as a deduction

from gross income, inter alia, "a reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence." Acting under this authority, the treasury in 1919 issued a regulation providing for an allowance for obsolescence of goodwill of breweries as a result of prohibition. This ruling remained in effect from 1919 until 1927. In 1927, a case having come into the courts on the question whether or not the goodwill had, in fact, been destroyed in that case, a district court held that the provision relied on did not authorize a deduction in any case for obsolescence of goodwill. This decision being affirmed by the circuit court of appeals, the commissioner amended the regulations so as to deny the deduction. It is to be presumed that the great majority of the cases had been decided under the regulations in force from 1919 to 1927, so that only a small residue of taxpayers was affected by the change of position. The circuit court of appeals, in deciding the case referred to (the *Red Wing Malting Company* case), held that the language, "including a reasonable allowance for obsolescence," did not add a new kind of deduction, and that the allowance for "exhaustion, wear and tear of property *used* in the trade or business" covered no more than the provision of the 1916 act, which allowed a deduction for the "exhaustion, wear and tear of property *arising out of its use* or employment in the business or trade," and that therefore exhaustion was not allowable unless caused by use. This conclusion was based largely on the court's reading of the legislative history of the provision, a history which is of particular interest to accountants.

How Depreciation was Interpreted in 1909 The corporation excise tax law of 1909 allowed the deduction of "a reasonable allowance for depreciation of property, if any." This act is memorable because it led to the first occasion on which the accountants of the country as a body presented the views of the profession on what they conceived to be unsound legislation and also the first occasion on which members of the profession were called in to assist in framing regulations to give effect to an apparently unworkable act. Since the tax was in terms based on receipts and payments, any allowance for depreciation might seem incongruous if it were not well understood that the law was conceived and was to be administered as an income or profits tax, and that the words "received" and "paid"

were used as what has since come to be known as camouflage, which was expected to protect the law from attack on constitutional grounds. In the regulations, the term "depreciation" was interpreted in the accounting rather than the etymological sense, and it was provided that the deduction should be "the loss which arises from exhaustion, wear and tear or obsolescence out of the use to which the property is put." There was, however, a disposition in the treasury to make the determination of the allowance at least in part a question of value rather than of exhaustion.

**Later Recognition
of Obsolescence.**

When the revenue act of 1913 was being prepared, a committee of the American Association of Public Accountants, predecessor of the American Institute of Accountants, conferred with those who were drafting the bill and recommended, among other things, that the sense of the regulation under the 1909 act should be embodied in the text of the act of 1913. That act, when passed, provided for "a reasonable allowance for depreciation by use, wear and tear of property, if any." It was, however, apparent that depreciation of property used, which ought to be allowed, might arise while the property was in use, but not by or from use. Such allowances were commonly made by the treasury under the act of 1913 and also under the act of 1916. In 1918, income taxation had assumed a new importance, and, the 1917 law having proved almost unworkable, the treasury, for the first time, was allowed to draft a law. The bill, as it passed the house, provided for "a reasonable allowance for exhaustion, wear and tear of property used in the trade or business." The senate amended the provision to read, "a reasonable allowance for depreciation of property used in the trade or business." The conference committee changed the provision to read as it now stands, "a reasonable allowance for exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence." The reasonable interpretation of the intent of congress would seem to be that in 1918 it sanctioned the previous practice of allowing deductions for exhaustion of property used, even though that exhaustion resulted not from use but from other causes such as lapse of time, and that it specifically provided for consideration of the element of obsolescence in determining the allowance. It was upon this construction that the treasury regulation, above referred to,

specifically allowing obsolescence of goodwill in the case of breweries, was formulated. The circuit court of appeals in the eighth circuit appears from the record to have based its decision adverse to this regulation in the *Red Wing Malting Company* case on a reading of this history which was not entirely accurate. The circuit court of the second circuit, in a careful opinion in the *Haberle Crystal Springs Brewing Company* case, sustained the regulation. It was on this narrow point of statutory construction that the latter case went to the supreme court, there to be decided, as we have said, on a point which apparently had not been considered by anyone in the ten years' history of the question.

**The Hazard
of Court**

This history strikingly illustrates the hazards involved in taking a tax case to court. The *Red Wing Malting Company*, presumably convinced of the soundness of its position on the question of fact which was at issue in the treasury (i.e., whether its goodwill had been destroyed or not), went to the courts only to have its contention on the question of fact sustained but the allowance denied as a matter of law on the basis of a new meaning read into the statute in the light of the previous legislative history of the question. The *Haberle Crystal Springs Brewing Company*, having succeeded in convincing one circuit court of appeals that the other circuit court had erred in its reading of legislative history and its legislative construction, was taken to the supreme court on this narrow question, only to have its case decided on a point which had never been urged or argued.

**The Off Year in
Legislation**

Every second year in the history of legislation is a time of comparative calm for American accountants and with equal regularity the intervening years are filled with fear and uncertainty. No year is altogether free of the trammels of doubt, for there is always a legislature or two which is about to meet or is meeting, and whenever that happens the accountant is in danger of something new and strange. This year of grace 1930 is an off year. There are only ten states or territories whose legislative bodies are required to assemble. Others, it is always true, may be called in special session, but that is not probable.

The public is not indulgent in its judgment of the need for special sessions, and legislators themselves are not so apt to be led astray into unnecessary convention as they once were. It may be assumed, therefore, that the only legislatures which imperil accountancy and other things this year will be those of Kentucky, Massachusetts, Mississippi, New Jersey, New York, Rhode Island, South Carolina and Virginia, which met in January, that of Porto Rico, which met in February and that of Louisiana, which is to meet in May. Ten legislatures, it is quite true, can do a great deal of harm, but in comparison with the potential accomplishments of forty or more legislatures meeting in the odd years, the menace of the even year seems almost negligible. And then, of course, it should not be forgotten that any legislature may enact laws or amend existing laws to the general benefit of mankind or perhaps to the particular assistance of the accountant. It is not fair to disregard the occasional good work done by legislatures. Often the members of these institutions are imbued with a genuine desire to right a wrong or to relieve intolerable conditions, and in a good many cases they succeed. The unfortunate truth that most legislation is either unnecessary or vicious is not or should not be the only factor in the public's estimation. Until we come to a completely benevolent autocracy or a pure anarchy, we seem destined to suffer legislative interference. It is not ideal at all, but it is practical, at any rate in our present undeveloped condition.

**Accountants Themselves
Often to Blame** The dangers which lurk in legislative halls are not pointed solely at accountants. There are many other people engaged in equally respectable pursuits whose activities are subject to constant meddling. If accountancy seems sometimes to be singled out for special attack it must be remembered that accountants themselves are largely to blame. Wherever there is a law which grants peculiar rights and titles to a select class or group there will always be clamorous members of the community crying out that their liberties are in jeopardy or that they too should be stamped with the seal of state sanction. Those fellows from the outside crowding into the corridors of capitols are accountants of sorts. Some of them are good accountants, some are miserable accountants, others are merely accountants in posse; but to the public they look like accountants and the

legislator who is not adept in the separation of good and evil among the claimants to proficiency may be forgiven if now and then he pays too much heed to the protests of the protestant. It is most improbable that any legislator, except when personal friends or supporters are concerned, feels much interest in the form or administration of laws governing professional practice of accountancy. He has other more magnetic matters drawing his attention. But when a vociferous demand for new law or amendment is made he listens to it, and in the absence of special knowledge he may be misled. A great deal of legislation has been needed to bring accountancy to its present place in the esteem of the public and as conditions change there will be necessity for other enactments. No one can deny that. The sad thing is that many of the efforts to amend are dictated by nothing more disinterested than a party of outs trying to be ins.

**All Interests to
Be Considered**

There will be attempts this year to maim or kill existing statutes and some of them may be sufficiently serious to merit attention, but so far as we have heard nothing of a grave significance has been introduced in any of the legislatures which are in session, and as most of the ten legislatures are nearing the conclusion of what they love to describe as their labors, it seems justifiable to hope that nothing injurious will be done. In some states there are laws which could be improved by amendment. There are crude or undesirable provisions in many laws, and as time goes on it will be expedient to change them, but when the effort is made it should be only after careful deliberation by accountants themselves in their societies. Individual attempts to alter laws are generally ill advised and productive of failure or worse. Much of the existing fault in laws is due to an unseemly haste to have something on the statute books. If the accountants in each state had worked harmoniously together, if all opinions had been discussed, if the interests of everyone had been considered and so far as possible protected, and if then there had been a united effort to present the case to legislators, we should have today a great deal better laws than we have and there would not be half the bitterness and opposition which is so frequently encountered. No law can be equally acceptable to all men and there will be opponents always. But the new tendency manifest in some parts of the country to give thought to the opinions of all

concerned will do much to remove honest enmity. It is useless to deplore the lack of unity in many past instances. The great point now is to take care that the reforms which are yet to be made be made after thorough preparation. If that be done the biennial peril of the odd years and the modified peril of the even will shrink and become controllable, to the infinite joy of us all.

Confirmation of Securities in Transfer

In recent issues of THE JOURNAL OF ACCOUNTANCY we referred, at times in a spirit of irony, to the difficulty which has arisen, especially in the audit of brokerage houses, in obtaining confirmation of securities held by transfer agents. The comments evoked a good deal of correspondence, and both transfer agents and accountants have been seeking a settlement of the difficulty. It appears, according to the transfer agents, that the enormous volume of securities submitted for transfer renders the task of verifying extremely heavy and these transfer agents feel that it is fair to make a charge for the service. Accountants felt that something must be done in order at least to ensure attention to requests for confirmation. The *Bulletin* of the American Institute of Accountants reports that a meeting was held on January 21st at which there were representatives of the principal transfer agents and of the accounting profession, when a tentative agreement was reached that for a period of six months a charge of \$1 for each item confirmed should be made. Whether this charge will prove excessive or not remains to be seen, but in any case the accountant can avoid any appearance of extortion by specifying to his client the amount of the demand by the bank or other transfer agent for confirmation. This agreement has been approved by a considerable number of companies which have transfer departments. A few companies will not make any charge for the service, but the great majority will charge a fee of \$1. A special form of request for confirmation has been prepared and is printed in the Institute *Bulletin* issued February 15, 1930.

Public Records and the Public Accountant

[NOTE:—The following article has been prepared by the staff of THE JOURNAL OF ACCOUNTANCY after prolonged investigation. The information upon which the article is based has been obtained from a large number of individual accountants, who spoke in many cases only from personal experience and memory. For this reason THE JOURNAL can not accept responsibility for omissions or inaccuracies which may occur in the following discussion, but as the utmost care has been exercised in its preparation it is believed that the article presents a fair and trustworthy picture of present conditions.—EDITOR.]

The theory of independent audit of financial records is sound beyond a doubt in application to the activities of government. Public offices and institutions exist for the sole and express purpose of serving the taxpayers who choose and support them. Officers' accountability to their constituents is no less urgent than that of corporation officers to stockholders.

The position of accountants in the employ of political units is theoretically comparable to that of privately employed accountants in industrial companies, but in fact the financial investigations and reports of government employees are often unsatisfactory, because in some cases such employees are chosen for political reasons rather than for personal efficiency.

It would be an inexcusable injustice to cast any reflection upon the integrity and ability of accountants and auditors in government employ as a class, because most of them are honest and able men, but in any consideration of the proper financial administration of political units the possibility of abuse of the power of appointment under existing conditions must be recognized.

In view of the wide acceptance and approval of the principle of independent audit in business, industrial and financial circles, it is astonishing, not to say discouraging, to discover to what a comparatively limited extent public accountants are engaged in audit of the accounts and records of government offices and public institutions.

LEGISLATION RELATIVE TO INDEPENDENT AUDITS

There has been an irregular tendency, during recent years, toward state legislation which would require periodical audits, by public accountants, of the books, accounts and records of state and county officers and departments, but the movement has

been wholly without coöperation. Most bills of this kind have seemed to lack enthusiastic support, and the large majority of them met a natural and painless death after reposing upon figurative tables until the adjournment of the legislatures concerned.

Some such bills have passed, but often through ignorant or careless phraseology much of their effectiveness has been impaired. Some bills have failed to specify that the audits be conducted by professional public accountants, leaving the way open for appointment of political favorites, who sometimes are accountants in no sense of the word.

The worst defect of present legislation of this type, however, is its haphazard and inconsistent nature. With a few exceptions, there is in no state a thorough plan of independent audit of the accounts of public servants. In some states the accounts of county officers are subject to periodical examination by public accountants appointed by district judges or grand juries; in others, the state auditor or controller or some other financial officer is authorized (in a few cases compelled) to appoint independent auditors to investigate the records of state departments, school districts, jails, hospitals, universities or other institutions, et cetera, in combinations of infinite variety. Many city charters stipulate that the fiscal affairs of the city be scrutinized by independent auditors, but the stipulation is not always obeyed and in a large number of cities there is no such provision.

BIDS FOR PUBLIC AUDITS

Even in some cases where the statutory provisions are all that could be desired, however, there is an unfortunate condition in administration of the law which weakens it considerably—the custom of accepting bids for the audit of public records. This is especially characteristic of municipal engagements. The system of bids may be effective and praiseworthy when it applies to purchases of materials, to contractors' services, to employment of artisans, or to anything in which the quantity and quality of goods or services rendered are evident, but it is unquestionably pernicious when professional functions are concerned, because the work tends automatically to fall into the hands of the least qualified practitioner. There are good and bad accountants, and the quality of their work varies. No layman, furthermore, can

be expected to know whether a completed audit is adequate or not, until some subsequent development proves the auditor's foresight or negligence. The acceptance of bids for audit is as unreasonable as would be the engagement of a physician on the same basis. Few patients would care to entrust themselves to a doctor whose sole qualification was the cheapest fee.

As a consequence, much of the auditing of public records, especially those of cities, is inferior. In many parts of the country reputable firms of accountants have little to do with such audits. Some of them refuse to submit lump-sum bids, feeling it contrary to professional dignity. Others periodically offer their services at a fair price in order to show willingness to coöperate, but under the bid system the engagement often goes to some accountant who is willing to accept a fee lower than that generally regarded as a minimum for professional service of an acceptable standard. In some cases the daily compensation for the whole audit has been less than that commonly recognized as a minimum fee for the services of a junior assistant.

Ignorance and inertia on the part of public officers are undoubtedly largely responsible for the continuance of bidding for public audits. A Texas court recently held that a statute requiring bids for county contracts did not control engagement of an auditor. The attorney-general of Florida is said to have delivered an opinion to the same effect. It is probable that in most places there is no legal necessity for bids for accounting engagements.

Arguments against bids for audits have been presented on several occasions in the editorial pages of THE JOURNAL OF ACCOUNTANCY and it may be safely said that the system has the disapproval of accredited public accountants in general.

EXTENT OF INDEPENDENT AUDIT OF PUBLIC RECORDS

It appears that in very few states is it required by law that public accountants be engaged for examination of governmental accounts of any kind, and in at least two states where there is such a law it is practically robbed of its strength by the system of bidding. In nearly two thirds of the states it is said that public accountants are rarely employed for this type of work, except in desultory municipal engagements. In about one third of the states professional practitioners are called in at more or less frequent intervals, in the discretion of state authorities.

Often it is only the advent of trouble that finally induces the engagement of public accountants. Fraud, or the suspicion of it, occasionally incites the taxpayers to insist on an independent audit of the records of some particular officer or department. It seems not to occur to most citizens, however, that such an audit at periodical intervals would preclude the possibility of mismanagement of public funds.

It may be presumed that officers with discretionary powers in the matter of engaging public accountants shy at the expense involved in regular audits, or, as is often the case, the appropriations at their disposal may be simply inadequate. It would require only a brief trial to demonstrate, as has so often been demonstrated in the past, that the periodical audit is an indubitable economy.

In a report of the governor of Pennsylvania, dated January 21, 1929, addressed to the state assembly, the results of audits of state departments are revealed, and the facts disclosed are in themselves a hearty endorsement of the value of independent audit of governmental affairs. Quotation from the report may be of interest:

“Charged with direct responsibility for the fiscal condition of the state, I desired to be informed in detail with regard to the affairs of the several departments, boards and commissions, particularly at the beginning of the first biennium of my administration, June 1, 1927. With this in mind, I requested practically all departments, boards and commissions to obtain and submit to me audits as of May 31, 1927. In response to this request, most of the departments, boards and commissions employed public accountants to make audits as requested. . . .

“The department of justice advised me it could find nothing in any statute which renders examination, by public accountants, unlawful or inconsistent with the functions of the auditor general, and that it was therefore entirely proper for the several departments, boards and commissions, if and when necessary for the intelligent management of their own affairs and for enabling them to give to the governor such information as he desired, to employ persons to make such examinations.

“Accordingly, three firms of public accountants were employed and comprehensive studies were made at a cost of \$509,574.44. To November 30, 1928, there had been actually recovered and deposited in the state treasury as a result of these audits, \$286,826.29, and charges of \$282,671.72

entered upon the books to be collected, making a total of \$569,498.01. Cash surpluses aggregating \$2,080,835.42, held by departments, boards and commissions, were disclosed, as of May 31, 1927, which had accumulated from various sources for many years. In many instances these surpluses were not heretofore considered state funds, but the department of justice advised me that these surpluses are state funds, no part of which may be used unless authorized by the general assembly. I, therefore, request the general assembly to require the several departments, boards and commissions having these surpluses in their possession to pay them into the state treasury.

"The public accountants estimated further, that approximately \$2,500,000.00 could have been collected or saved for the biennium ending May 31, 1927, if different methods had been pursued.

"Therefore, the audits resulted not only in more than paying for themselves by actual moneys received or to be received but also in suggesting the introduction of better practices which would involve the saving of substantial sums of money each biennium. With the knowledge gained from the audits it has been possible to bring under budgetary control expenditures not heretofore so regulated. . . .

"The audits further disclosed deficiencies in state welfare institutions for periods prior to June 1, 1927, amounting to \$136,525.17."

In Utah there is said to be a general appreciation among public officers of the services which public accountants are in a position to render the governmental administrators. Especially in school districts has the value of such services been proven, not only in audits but in budget preparation as well. The laws of that state require that all cities, counties and school districts operate under a budget plan and that all counties of the state and all cities of the first and second class be audited at least biennially and annually, respectively, by competent public accountants. While state officers, in adopting the system of bids in execution of these laws have unfortunately exposed the state to the danger that the accounting work will be done too cheaply and therefore perhaps incompletely, the situation in Utah is nevertheless far more satisfactory than in the great majority of the states.

In Colorado, although an anomalous condition exists, it results in rather extensive employment of public accountants. Normally the state public examiner, a subordinate of the state auditor, is required to audit the records of all the counties of the state, but frequently there is inadequate appropriation—sometimes

none at all—with which to carry out the work. In these circumstances it is customary for the counties themselves to call on public accountants, although, as a matter of fact, many counties regularly retain independent auditors, whether audits are performed by the state officers or not. It is estimated that about twenty-five per cent. of the counties of the state, and perhaps ten per cent. of the cities and towns, have had their accounts audited periodically by public accountants for many years. In 1929 records of about half of all the counties in the state were audited by public accountants because the state public examiner had no appropriation for the purpose. About a decade ago in Colorado every state institution's accounts were audited by public accountants at the instance of a voluntary organization devoted to encouraging more economical administration of public affairs.

In a great many states a state auditor or examiner has a nominal authority or duty to audit accounts of governmental subdivisions, but there seems to be much evidence that the work is in some cases done sporadically and superficially. In several states special boards or departments have been created whose functions include the audit of subdivisions. For instance, in Alabama an examiner of public accounts is charged with the duty; in California the state department of accountancy supervises the work; in Ohio it is a board of state examiners and in South Dakota a division of audits and accounts. In Wisconsin public accountants are practically excluded from municipal or governmental audits by the functions of the board of public affairs, the director of budgets and the state tax commission, whose staffs make such investigations. It is entirely possible that this type of organization may produce satisfactory results, but business corporations generally have found that audit by officers and employees of the company itself is not enough. In any activity of complicated structure, in which considerable sums of public money are involved, the independent audit is necessary to complete efficiency and safety.

In order to indicate the wide variety of public records in the several states which have been audited by public accountants on various occasions in the past—proof, incidentally, that there is hardly a state by which the need for professional accountants has not been recognized at some time or other—it may be of interest to list the different types of engagements which have actually been undertaken by public accountants.

The Journal of Accountancy

UNITS WHOSE RECORDS HAVE BEEN AUDITED BY PUBLIC ACCOUNTANTS

Counties	State public-welfare commission
Cities	State industries (mills, etc.)
School districts	State banks
Irrigation districts	Municipal sinking fund
State treasurer's office	Municipal street, sewer and levee districts
State comptroller's office	Municipal light plants, water department, street-railway department, etc.
State tax commission	Library (municipal)
State tax collector	Board of education
Department of finance	Teachers' retirement fund association
Bank examiner's office	Bankrupts
State broker's commission	Licensed moneylenders
State insurance commission	Public utilities (for rate revision)
State highway department	Factory inspector
State university	State institutions (hospitals, prisons, etc.)

Following are some of the officers or boards in the different states which have appointed public accountants for such engagements:

Governor	State accounting department
Legislature	Commissioner of banking
Grand jury	Commissioner of securities
State comptroller	Bank examiner
State auditor	Public service commission
Examiner of public accounts	Mayor
Board of auditors	Board of education
County courts	City council
County commissioner	

During the 1929 sessions of state legislatures a good many bills dealing with audit of public records were introduced, but except in a few cases they were, as usual, received with apathy and suffered to die unnoticed. The mere fact of their introduction indicates an interest in the subject, however, and a tendency in the right direction. It seems that state societies of certified public accountants might perform a useful service by appointing committees to survey conditions in their own states and by recommending and supporting legislation designed to improve matters. The theory of the independent audit is as sound in application to governmental affairs as to those of business, but in this, as in other things, governmental practice is woefully behind that of industry and commerce.

Perhaps it might not be amiss for the American Institute of Accountants to appoint a special committee to study the situation and report on the desirability of drafting model legislation for the use of state societies. In such a project, as well as in effecting passage of such model bills, the Institute might receive the coöperation of some national organization devoted to the scientific conduct of government, such as the National Institute of Public Administration, or the Institute for Government Research.

Following are brief summaries of the conditions in all the states from which information could be obtained:

ALABAMA

The law of Alabama provides that in cities and towns the mayor shall appoint an "expert" accountant to audit the books and records at least once a year. The work is usually let on the basis of competitive bids, although some public accountants have obtained municipal engagements on the regular per-diem fee basis. The department of the examiner of public accounts conducts the examination of records of all county offices and it is only upon occasion of misappropriation of funds that the assistance of independent auditors is ever requested.

ALASKA

The laws of Alaska provide for a board of auditors consisting of three government officers and authorizes the board to employ expert accountants to assist in its auditing work. In the past this board has retained a firm of public accountants which makes biennial examinations of governmental records and reports to the legislature.

ARIZONA

There is no law in Arizona requiring audit of any department of the state by public accountants. Such audits are the duty of the state auditor, but up to this time the legislature has made no appropriation to enable him to discharge the duty. The auditor is empowered by law to employ and fix the compensation of a "competent accountant" for the purpose of auditing the accounts of the Arizona industrial commission. The auditor is also given indirect authority to employ assistants for the examination of books and records of any licensed money-lender. Public accountants have been employed by the legislature to audit the

books and records of the state highway department on at least one occasion.

ARKANSAS

In Arkansas public accountants have audited municipalities, improvement districts, highway, street, sewer and levee districts as well as counties. A bill was passed at the 1929 session of the legislature providing that certified public accountants audit the accounts of the state highway department, but the terms of the engagement provided in the law were found to be impracticable. The state board of accountancy advised the officers in charge of administering the law that those terms were incompatible with the customary procedure of reputable public accountants, and after some deliberation it was decided to conduct the audit in accordance with procedure suggested by the board of accountancy.

There is no other law in the state requiring public accountants to audit public records, but professional accountants nevertheless are engaged for a large amount of this sort of work in counties and cities. It is not believed, however, that professional accountants have often examined the books and records of state departments.

CALIFORNIA

The division of budgets and accounts of the department of finance of the state of California maintains a staff to audit the accounts of state boards, departments and commissions. Under the law certain official accounts and records are audited by public accountants. Public accountants are also employed to quite a large extent in conducting audits of municipalities whose charters grant authority for such audits.

COLORADO

The state public examiner of Colorado is required to audit records of all counties, but frequently he is left without appropriation or with inadequate appropriation to carry on the work. In such circumstances public accountants are called upon, although some counties always retain public accountants regardless of the examinations conducted by the state examiner. It is estimated that about twenty-five per cent. of the counties, and perhaps ten per cent. of the cities and towns, have had their accounts audited regularly by public accountants for many years. Occasionally

special audits of state institutions are conducted by public accountants.

CONNECTICUT

The state authorities of Connecticut have engaged public accountants for specific examinations, but there is no statutory requirement for independent audit of public records. It is provided in the charters of some municipalities that certified public accountants may conduct periodic audits of the books, records and accounts of the place concerned. A law passed at the 1929 session of the state legislature provides that any town may employ a public accountant or a firm of public accountants to replace its town auditors.

DELAWARE

Several municipalities in Delaware have employed public accountants for audits of the books and records and also for the installation of accounting systems. A public accountant has for some time made up the budget of the state highway department, and the state auditor has engaged independent auditors to examine the accounts of state institutions. About ten years ago public accountants were employed for the purpose of installing an accounting system for the state.

DISTRICT OF COLUMBIA

In the District of Columbia examination of public records which might ordinarily be delegated to public accountants is conducted by the bureau of efficiency and the Institute for Government Research.

FLORIDA

There seems to be no law in Florida requiring engagement of public accountants by state officers. The state auditor and the state comptroller are supposed to conduct audits of the accounts of counties and of state banks. Many cities in Florida require periodic audits by public accountants, but in most cases the system of competitive bidding is in effect. As far as could be learned no audit of county accounts had ever been conducted prior to 1930 by a public accountant although certain county boards, particularly boards of education, had engaged independent auditors. The governor is legally empowered in certain cases to direct that the accounts of certain public bodies be audited at the

petition of taxpayers, but even in these cases the work has been done by the state auditors. A bill was passed at the 1929 session of the legislature authorizing appointment of public accountants by county commissioners.

GEORGIA

The state auditor of Georgia has the duty of auditing all departments of the state government. He is provided with a limited staff and has from time to time, with the approval of the governor, employed public accountants to assist in investigations, particularly of the highway department. The superintendent of banks has called upon accounting firms for assistance in the liquidation of defunct institutions and in special examinations of closed banks. The public-service commission rather infrequently calls upon public accountants for investigations incident to petitions of public utilities for rate revisions. Fees for this sort of work are restricted to a per-diem rate of \$20 a man, plus expenses. The Georgia banking act of 1919 requires semi-annual examinations of state banks, and the directors are authorized to engage certified public accountants to conduct these examinations. Independent auditors are frequently engaged in this way. It is said to be a fairly general practice among all counties of the state and among municipalities of 5,000 population or more to employ public accountants to conduct annual audits. This work, however, is usually awarded on the basis of competitive bids and the engagements are generally obtained for compensation disproportionate to the effort necessary for thorough audits of this type.

HAWAII

No practising public accountant has opportunity to audit public records in the territory of Hawaii. All such matters are subject to the jurisdiction of an officer of the territory entitled "Auditor," whose principal duty is not to conduct audits but merely to check disbursements and ascertain that warrants issued are legitimate charges against specific appropriations.

IDAHO

Records of state departments in Idaho are usually audited once a year and county records as a rule every two years. Information obtained from Idaho does not indicate that there is any

special requirement for the employment of public accountants for such audits. The only statutory provision requiring audit appertains to independent school districts whose accounts must be audited at least once every four years. The state department of education may require examination of the books of any independent or common school district when it is deemed advisable.

ILLINOIS

The law of Illinois requires that in all counties which do not have an elective auditor (that is, counties of 75,000 people or less) the county board shall appoint an auditor and fix his compensation, but there is no stipulation that such auditor shall be a public accountant. The law requires examination of county accounts every two years and it may be amended to provide for annual audit. In cities under commission form of government an annual examination is required. It seems that public accountants participate to a limited extent in the audit of county records, but there is no requirement in the state that public accountants be engaged for any governmental audit.

INDIANA

Public accountants in Indiana are not engaged for the examination of public records, as the law of the state delegates this duty to the state board of accounts. In occasional instances public accountants have been engaged to audit the records of such public institutions as utilities owned by municipalities wherein public officers disbursed consumers' money rather than that of the general taxpayer.

IOWA

There seems to be no legal requirement for the employment of public accountants by state subdivisions in Iowa. The principal units which have recently been audited by public accountants are school districts, and municipal water works and coliseums. Public accountants have been engaged to install accounting systems in municipal light plants.

KANSAS

Public accountants are not employed by the state of Kansas for examination of public records. Under the law the state accountant is supposed to be a practising public accountant, al-

though not all incumbents of the office have been professional accountants. The state accountant is responsible for audit of all departments, commissions and institutions of the state. He usually has a staff of about six men. The legislative intent in creating the office was that it should take the place of outside firms of accountants in audit of state records.

County commissions, city councils and other governing units engage public accountants frequently, although the regularity of audits by professional practitioners is uncertain. Often counties or cities delay examination by public accountants until financial confusion arises or until there is suspicion of defalcation of public funds.

Laws have been introduced in the legislature to create a state department which would audit accounts of all cities, counties, etc., as under the Indiana and Ohio plans, but such a law has never been passed in Kansas. At the last two sessions of the legislature a bill to require county audits by certified public accountants, to be appointed by district judges, was introduced but failed of passage.

KENTUCKY

There seems to be no provision in the statutes of Kentucky authorizing the engagement of public accountants for the audit of governmental records. The commissioner of banking and the commissioner of securities have in the past employed public accountants to make special investigations. The state legislature has on one or two occasions authorized employment of public accountants to make examinations of the records of the state highway commission and has appropriated funds from the state treasury to fulfil the expenses of such examinations. In the city of Louisville the sinking fund, the board of park commissioners, the free public library and the school board are said regularly to engage public accountants to audit their accounts. On one occasion the city water company, by authority of the city council, caused an independent audit of its records.

LOUISIANA

It appears that governmental records are rarely, if ever, examined by public accountants in Louisiana. The referee in bankruptcy is empowered to appoint accountants, but inquiry does not reveal that he has ever appointed practising public accountants to assist him.

MAINE

Some cities and towns of Maine engage public accountants to conduct annual audits. The charter of the city of Portland contains a clause directing such an audit, but it has recently been ignored by the authorities. It can not be learned that the state accounts have ever been examined by public accountants.

MARYLAND

All state institutions in Maryland are audited by the state auditor, who is appointed by the governor. At one time when there was reason to believe that a shortage existed in the funds of the state roads commission, public accountants were called in to make a thorough audit. Municipalities and county commissioners frequently employ public accountants, but not with any regularity. There has been some agitation in the state to require that state departments be audited by a public accountant.

MASSACHUSETTS

The Commonwealth of Massachusetts authorizes and provides for audit of the accounts of cities and towns by the division of accounts, of which the director is a certified public accountant. A permanent staff of 20 to 30 men is employed by the division. The department may undertake an audit on its own initiative or at the request of local authorities and also may assist cities and towns in installing systems and in reorganizing financial procedure. Reasonable fees are charged for these services. The division has a good reputation and is said to have accomplished able work. Its services in most cases receive preference over those of public accountants. State institutions are also audited by a department of the commonwealth and public accountants are called upon only on special occasions. It is not uncommon, however, for public accountants to be engaged for special kinds of work. The accounts of the city of Boston have been audited by public accountants on behalf of the financial commission, the good government association and other organizations.

MICHIGAN

In Michigan there seems to be no statutory requirement for the employment of public accountants to audit public records. The auditor-general maintains a large staff to audit periodically the accounts of state departments and institutions. Cities,

towns, villages, townships and school districts sometimes engage public accountants under authority of municipal councils or boards, but the number of these instances is small. In such cases bids are usually required. Such governmental subdivisions as the department of street railways of Detroit, the University of Michigan and a board of county road commissioners have had accounts audited by public accountants.

MINNESOTA

There seem to be no statutes in Minnesota requiring that public records be examined by public accountants, although there are certain laws requiring examinations by the public examiner, an appointed officer. Professional accountants are regularly engaged by some municipalities, school districts, etc., to conduct annual or biennial audits. State banks must be examined by the commissioner of banking but public accountants are sometimes engaged to make examinations of a state bank on behalf of the examining committee of the board of directors.

MISSISSIPPI

In 1924 the legislature of Mississippi created a bureau under the auditing department in charge of a chief accountant, whose duty is to audit the records of state institutions and all counties, with the aid of three assistants. The law also provides for adoption of a uniform accounting system in the counties. The chief accountant is required by law to be a certified public accountant. There is no law in the state giving authority for audit of state departments, but the attorney-general has ruled that it is within the scope of authority of any department head to use funds appropriated for general maintenance for audit of the accounts of his individual department. By authority of this opinion public accountants have audited the books and records of the state tax commission, state insurance commission, state tax collector, state highway department and other minor commissions, such as the factory inspector's office, etc. A bill to authorize audit of the accounts of the governor and the state auditor, by a public accountant, has been introduced in the 1930 session of the legislature.

MISSOURI

There is no statute in Missouri requiring that public accountants audit the records of political units in the state and little of this

kind of work is done by professional accountants. The charter of Kansas City permits engagement of public accountants for audit of the city records, but it is believed that the provision has never been invoked. The charter of St. Louis provides that the books should be audited by a public accountant and such audits have been conducted there. Public accountants occasionally are engaged to devise systems of accounts for counties or municipalities and sometimes to audit the records of treasurers of counties or cities when there is a shortage.

MONTANA

Public accountants are not usually engaged for examination of governmental records in Montana. The accounts of counties and cities, school districts, irrigation districts, etc., are audited by a branch of the state bank examiner's department. On some occasions public accountants have been called upon for a more complete audit than that conducted by the state officers.

NEBRASKA

The accounts of the county treasurers in Nebraska are examined at least once in two years by political appointees of the auditor of public accounts. In some instances examinations made later by firms of public accountants have shown that these official examinations are not always thorough. In recent years many county commissioners have engaged professional accountants to examine all county records and occasionally they have specified that the work must be done by certified public accountants. The tendency of the county boards to engage professional accountants seems to be increasing and it is hoped that the practice may become nearly universal.

NEVADA

State and county records in Nevada are audited by the state auditor, who is a political appointee. There is no law requiring examination of any public records by public accountants but county commissioners have authority to appoint other auditors to supplement the examinations of the state auditor. Some cities regularly employ public accountants to audit their accounts.

NEW HAMPSHIRE

There is no statute in New Hampshire requiring the examination of public records by public accountants. Independent

auditors have, however, been employed to examine the records of the state university.

NEW JERSEY

The records of the state of New Jersey have not been audited by outside accountants since 1915, when an investigation of comptrollers' accounts was conducted, with particular reference to the state highway funds. During the 1929 session of the legislature a bill was introduced providing an appropriation of \$150,000 for an audit of state accounts and a general revision of the accounting system. The commission created by this bill designated the National Institute of Public Administration to carry out the work. The audit of municipal and county records is in some cases conducted by public accountants, but the contracts are awarded on the basis of bids.

NEW MEXICO

Public accountants are engaged to a certain extent in the examination of public records in New Mexico. There is nothing in the law to prevent employment of public accountants by the state comptroller in discharging his duty of auditing the accounts of counties or other political subdivisions or institutions. However, in practice, the comptroller does practically all the work himself. Several state departments have in the past been examined by public accountants. During recent years the accounts of several counties, a few municipalities and some school districts have been audited by public practitioners.

NEW YORK

Cities of New York state which are empowered to do so by their charters may engage public accountants to conduct audits, but no other unit of the state has authority to engage independent accountants. In certain cases courts have compelled villages to restore money paid for auditors' fees because there was no specific authority for the engagement of the auditor. Westchester has a law empowering municipalities to employ independent accountants to audit certain departments. Public accountants have been employed for specific investigations of certain departments in the city of New York.

NORTH CAROLINA

The accounts of a great many public institutions of North Carolina are audited by public accountants, as are the records of

the state and local highway commissions. Many school boards have audits of their accounts and many do not. Under a recent act of legislature the audit of counties must be approved by the government advisory commission, which is appointed by state officers. This commission prescribes the form of the report and the information to be submitted by the accountant. It is said that a large number of counties, cities and small towns in North Carolina employ public accountants for audits of their books and accounts.

NORTH DAKOTA

The government of North Dakota has interested itself somewhat in state-owned industrial enterprises, and public accountants have been employed to some extent to conduct audits of these industries. Counties have also engaged independent auditors on certain occasions. In 1928 a firm of public accountants represented the state receiver of closed banks in a hearing before the master in chancery. The state law requires that records of political subdivisions be examined annually by the state examiner at a cost not to exceed \$10 a day. In these circumstances public accountants do not participate to a great extent in audits of municipalities or school districts.

OHIO

Accounts of the various political subdivisions of the state of Ohio are audited by a board of state examiners and, consequently, little or no work of this character is available for public accountants.

OKLAHOMA

The law of Oklahoma requires that all state and county examinations be made by the state examiner and inspector, whose office is elective. Cities and boards of education may employ accountants in their discretion or may apply to the state examiner and inspector for deputies to conduct examinations of their records. In either case the cost of the audit is borne by the municipality or board.

OREGON

The laws of Oregon provide that every county court in the state shall have an annual audit conducted by a "competent" accountant. The courts pass on the question of competence and

public accountants are not always engaged. At least one county has of its own volition employed a certified public accountant to install a modern accounting system. The city of Portland and some other cities in the state whose charters provide for audit employ public accountants, but usually on the basis of bids. The teachers' retirement-fund association, an adjunct of the school board, has recently obtained new legislation and one section of the law requires audit by a certified public accountant. Practitioners in the state hope for increasing recognition from governmental authorities.

PENNSYLVANIA

The governor of Pennsylvania recently directed audit of all departments, boards and commissions of the state, many of which employed public accountants for the purpose. It is the function of the auditor-general to ascertain whether or not the various state subdivisions have paid into the state treasury all moneys which should be so paid and whether or not there have been irregularities in the use of public funds. But beyond this there are many phases of operation and disbursement in which the governor and agencies of the state government have an administrative responsibility, and they are apparently at liberty to engage public accountants to conduct examinations necessary to obtain such information as may be desired. State officers have availed themselves of the services of public accountants to a considerable extent. A law of Pennsylvania known as the fiscal code requires the auditor-general to effect a considerable number of audits and it seems to be implied that he has authority to engage public accountants for the purpose.

PHILIPPINE ISLANDS

The bureau of audits of the Philippine Islands is required by law to audit all insular, provincial and municipal accounts and maintains a large staff for the purpose. Many of the employees of the bureau, as well as of the treasury bureau and the bureau of internal revenue are certified public accountants. It is said that most Filipino certified public accountants are in government service. Practising public accountants have only in rare instances been called upon to examine public records. They have, however, frequently been appointed judicial referees in cases where contracts and accounts were involved.

PORTO RICO

Inquiry has evoked no information of any case in which a public accountant has been engaged by the municipal governments or the insular government of Porto Rico.

RHODE ISLAND

Prior to the 1929 session of the Rhode Island legislature the laws provided for audit of public accounts by public accountants only in the case of the public-welfare commission in charge of penal and charitable institutions of the state. At the most recent session of the legislature a law was enacted providing that on request of a city or town the state commissioner of finance would perform an audit for a period of not more than one year and might also upon request install an accounting system. Half the cost of the work would be borne by the city or town making the request. Larger towns of Rhode Island have for some years been audited by public accountants and to a limited extent occasional audits of smaller towns have also been made by professional practitioners.

SOUTH CAROLINA

There are no laws in South Carolina compelling employment of public accountants for audit of public records but the value of accountants' services is widely recognized by state authorities. In several counties grand juries have recently stipulated that only certified public accountants should be employed to examine the county records. In the state bank examiner's office and in that of the comptroller, audits by public accountants are being recommended in an increasing number of instances. A recent act of the legislature authorizing an examination of the records of the state highway department provided that the work should be done under the direction of a public accountant.

SOUTH DAKOTA

The division of audits and accounts, an agency of the government of South Dakota, is required to examine the records of county officers every two years or oftener at the request of the board of county commissioners or on petition of taxpayers. The division also audits the accounts of cities of the first class annually and other cities, towns and school districts upon request.

Public accountants do very little of this kind of work. A few occasions when they have been engaged were during sessions of the legislature when special investigations were needed.

TENNESSEE

There is very little auditing of public records by professional accountants in Tennessee. Some counties and municipalities have engaged public accountants under authority of commissioners or mayors, but these engagements are infrequent. Audits of state departments are conducted by state auditors under the direction of the commissioner of finance and accounts. The charter of the city of Jackson is so phrased that public accountants must be engaged to audit the city records.

TEXAS

Various institutions of Texas undergo audits by public accountants who are selected, engaged and are acting for the heads of the various institutions. Such audits, however, are not made compulsory by statute but are merely in the discretion of local authorities and for their own purposes. At the 1929 session of the legislature a bill was passed by the house providing for the creation of the office of state auditor and his necessary assistants, this officer to be appointed by a majority vote of three persons, the governor, lieutenant-governor and speaker of the house. In this original draft, the person to be appointed was not required to be a certified public accountant. When the measure reached the senate, it was amended to provide that the auditor shall be a certified public accountant with not less than five years' experience and that the appointment shall be made in the manner of other executive appointments, by the governor with the advice and consent of the senate. The law was so enacted. The office was created for the purpose of examining the various departments, institutions and financial activities of the state, and the auditor is required to report his findings biennially to the governor and the legislature, including a report upon efficiency of personnel and suggestions for general improvement of the state financial system.

UTAH

Public accountants are frequently engaged in Utah to conduct the examinations of cities, counties, school districts and state

departments. Utah statutes provide that all counties must be audited at least biennially by competent public accountants and cities of the first and second classes are required by law to have their accounts audited annually by public accountants. However, in accordance with the official interpretation of the statutory requirements accountants have been required to submit bids and, therefore, the engagements have to a large extent been let on a competitive basis, resulting in inferior audits in many cases. The value of public accountants' services seems to be recognized to the greatest extent by school districts. Various boards of education have sought the aid of public accountants, not only in examination of records but also in the preparation of budgets. Cities, counties and school districts of Utah are required by law to operate under a budget plan. Officers are beginning to recognize generally the value of adequate accounting records and of assistance which public accountants may render.

VERMONT

In Vermont the law permits, but does not require, the governor to employ a public accountant to audit the records of the state treasurer's office. Public accountants have been employed for this purpose during the past four years.

VIRGINIA

Audits of a considerable number of municipalities and counties in Virginia are open to public accountants, but the system of bidding is in effect, which results often in lowering the compensation to an undesirable point. The present law of the state requires examination of county records by the state accounting department and it is believed that little work of this kind is now done by public accountants. The auditor of public accounts is empowered to employ certified public accountants in investigations of the accounts of state departments, offices, boards, commissions or institutions, provided that compensation of such accountants does not exceed sums available by appropriation for the conduct of his office.

WASHINGTON

Public accountants in the state of Washington do very little auditing of public records. A state department of efficiency is charged with the duty of examining records of public officers.

In at least two cases, one of them caused by the suspicion of fraud, public accountants have been engaged for the audit of county records and the accounts of a state institution. In both cases the state authorities questioned the legality of payment of the accountants' fees. Recently a firm of public accountants was engaged to conduct a survey of the city of Seattle with a view to elimination of departments and introduction of a better system of accounting.

WISCONSIN

There is no law in Wisconsin requiring the employment of public accountants to audit the books of any state department. The board of public affairs conducts all such audits for branches of the government. A law passed at the 1929 session of the legislature provides that the director of budgets shall make an annual examination of the accounts of the board of regents of the state university and of the normal schools, the state board of control, the highway commission and other departments. The state tax commission supervises municipal accounting and maintains a staff to audit accounts of towns, cities or counties at request of the governing body or of its own volition if it appears necessary. Practising public accountants are practically excluded from the field of municipal or governmental audits.

WYOMING

It appears that no auditing of public records in Wyoming is done by independent auditors. The law provides that the state examiner shall conduct annual examinations of the books and accounts of cities, counties and school districts. This provision is not always complied with because of lack of facilities.

Stock Dividends—Life-tenant or Remainderman

By L. L. BRIGGS

Shares of corporation stock are often held by an estate under a will in which the testator provides that the income of the estate is to go to a party called a life-tenant as long as that person lives and at his death the principal passes to another party known as a remainderman. Whether the former or the latter is entitled to stock dividends on such stock is an extremely difficult question to decide and it is one which has caused the courts of the United States and of England much trouble for more than a century. There is considerable variation in the decisions of the courts of the several states, and to make the subject more perplexing, there are inconsistent rulings within the same jurisdiction. This conflict of authority is probably due in part to the unusual amount of litigation between tenants for life and remaindermen in respect to this kind of dividend and in part to the fact that the business corporation is such a comparatively recent development in our economic structure that there has been a lack of precedents in the common law to guide the jurists in making their decisions. However, four fairly well-defined rules have been developed by the courts, namely: the American or Pennsylvania, the Massachusetts, the Kentucky and the English rule.

Under the American or Pennsylvania rule, the time with relation to the life term in which the profits being capitalized by the stock dividend were earned determines whether the life-tenant or the remainderman is entitled to the distribution. The courts may inquire as to the time and method of accumulation of such profits (*Soehnlein v. Soehnlein* (1911) 146 Wis. 330). They may look into the facts, circumstances and nature of the transaction and determine the nature of the dividend and the rights of the contending parties according to justice and equity (*Matter of Osborne* (1913) 209 N. Y. 450). If the entire fund was accumulated before the beginning of the life estate, the stock dividend goes to the remainderman (*Smith's Estate* (1891) 140 Pa. 344); while if the profits capitalized by the declaration of the dividend were earned subsequent to the inception of the life estate, the distribution belongs to the life-tenant (*Lord v. Brooks* (1872) 52

N. H. 72). According to Justice Marshall in *Soehnlein v. Soehnlein* (1911) 146 Wis. 330:

"In disposing of stock or property dividend as between tenant and remainderman the court may properly inquire as to the time when the fund out of which the extraordinary dividend is to be paid was earned or accumulated, and also as to the method of accumulation. If it is found to have accrued or been earned before the estate arose it may be held to be principal; and, without reference to the time when it is declared or made payable, to belong to the corpus of the estate and not go to the life-tenant. But when it is found that the fund, out of which the dividend is paid, accrued or was earned, not before, but after the life estate arose, then it may be held that the dividend is income and belongs to the life-tenant."

The justice who gave the decision in *Matter of Heaton* (1915) 89 Vt. 550, stated the rule in the following words:

"By the rule we adopt, the life-tenant receives all the profits of the corporation accumulated during the life of the trust which are released from corporate control and distributed among the stockholders during the life tenancy, regardless of the form of the distribution; and the remainderman receives at the end of the term the corpus of the trust fund undiminished in value from what it was at the inception of the trust, which is all that he can justly claim, unless the creator of the trust has evidenced an intention that he shall receive more. It works out exact justice between the parties and, we believe, will more often give effect to the unexpressed intention of the testator."

In case the earnings were accumulated partly before and partly after the beginning of the life estate, the stock dividend must be divided between the tenant for life and the remainderman, the former taking the stock representing the portion of profits earned after the creation of the trust fund and the latter the part which was earned before that date. Justice Chase, in *Matter of Osborne* (1913) 209 N. Y. 450, said:

"Extraordinary dividends, payable from the accumulated earnings of the company, whether payable in cash or stock, belong to the life beneficiary, unless they intrench in whole or in part upon the capital of the trust fund as received from the testator or maker of the trust or invested in the stock; in such case such extraordinary dividends should be returned to the trust fund or apportioned between the trust fund and the

life beneficiary in such a way as to preserve the integrity of the trust fund."

Justice Chase, in the same case, gave the following definite directions for the apportionment of the dividend between the parties:

"The intrinsic value of the trust investment is to be ascertained by dividing the capital and the surplus of the corporation existing at the time of the creation of the trust by the number of shares of the corporation then outstanding, which gives the value of each share, and that amount must be multiplied by the number of shares held in the trust. The value of the investment represented by the original shares after the dividend has been made is ascertained by exactly the same method. The difference between the two shows the impairment of the corpus of the trust. . . . If the dividend is in stock the amount of impairment in money must be divided by the intrinsic value of a share of the new stock and the quotient gives the number of shares to be retained to make the impairment good—the remaining shares going to the life beneficiary."

The presumption is that every stock dividend is from earnings since the creation of the life estate and consequently goes to the life-tenant (*Matter of Leask* (1913) 159 N. Y. App. Div. 102). According to Justice Potter in *Matter of Robinson* (1907) 218 Pa. St. 481:

"We may conclude therefore on principle that presumptively every dividend . . . in new shares, goes to him who was the beneficial holder of the shares at the time when it was declared. This will carry every dividend presumptively to the life-tenant instead of to the remainderman."

The remainderman is entitled to what the stock was actually worth when the trust was created (*Appeal of Boyer* (1909) 224 Pa. St. 144). In *Gilkey v. Paine* (1888) 80 Me. 319, the court said:

"The effort in this country has been generally to maintain the integrity of the capital and to give all surplus earnings, in whatever form distributed, to the life-tenant. And, perhaps, no better rule than this can be adopted."

However, the burden of proof is upon the remainderman to show that the principal has been impaired by the stock dividend (*Kalback v. Clark* (1907) 133 Iowa 215). If he is unable to prove this to the satisfaction of the court he will not be entitled to any of the dividend.

Where there is no accumulation of earnings and a stock dividend is declared from surplus representing appreciation of the assets of the corporation, the remainderman is entitled to the distribution. Such distribution in these circumstances is justified by the court, in *Kalback v. Clark* (1907) 133 Iowa 215, in the following words:

“If, however, the so-called stock dividends represent the corporate capital—that is, represent nothing but the natural growth or increase in the value of the permanent property, so that there is merely a change in the form of ownership—such stock should go to the remainderman; for in such case the dividend is a dividend of capital, representing simply an increase in the value of the physical property, goodwill or other things of tangible value.”

The decision of *Kalback v. Clark* was followed by the court in *Poole v. Union Trust Company* (1916) 191 Mich. 162, and has been followed by the courts of several other states. In *Holbrook v. Holbrook* (1907) 74 N. H. 201, it was held to make no difference whether the increase in value of the assets occurred before or after the creation of the trust.

There is some conflict of authority among the states following the American rule as to whether the court need accept the statement of the board of directors as to the source of dividends when the apportionment of them between life-tenant and remainderman is the problem for solution. In *Matter of Northern Central Railway Dividend Cases* (1915) 126 Md. 16, the court held that the declaration of the corporation that the dividend represents profits must be followed by the court in deciding whether a stock dividend is corpus or income. A few years later, a California court (*Matter of Duffil's Estate* (1919) 180 Cal. 748) decided that the determination of the directors of a corporation as to the sources of its dividends has no binding or persuasive effect upon the court when it is required to decide whether a stock dividend is corpus or income in order to determine its ownership as between tenant for life and remainderman.

The Massachusetts courts have adopted the rule that the intent of the corporation as shown by its votes in declaring the dividend determines whether such distribution is an apportionment of additional stock or a division of profits among the stockholders (*Rand v. Hubbell* (1874) 115 Mass. 461). The declaration of a stock dividend shows the intention of the corporation to retain

its profits as capital: consequently, the remainderman is entitled to the shares distributed. According to Chief Justice Chapman in the leading case of *Minot v. Paine* (1868) 99 Mass. 101:

“The money in the hands of the directors may be income to the corporation; but it is not so to a stockholder until a dividend is made; and, where the company invests it in buildings and machinery, or in railroad tracks, depots, rolling stock, or any other permanent improvements, for enlarging or carrying on their legitimate business, it never becomes income to the shareholder. The investment becomes an accretion to capital; and it is equally so whether they increase the number of shares, or the par value of the shares, or leave the shares unaltered.”

The rights of the life-tenant and the remainderman are determined by what part of the property is held in the business as a fund to be used to advance the interests of the company and what part is permanently separated from the business and turned over to the stockholders (*D'Ooge v. Leeds* (1900) 176 Mass. 558). The court, in *Lyman v. Pratt* (1903) 183 Mass. 58, said:

“The real question is whether the distribution made by the corporation is of money to be taken and used as income, or of capital to be retained in some form as an investment in the corporation.”

In brief, all stock dividends, whenever earned and however declared, are considered to be capital and as such they pass to the remainderman. According to the court in *Leland v. Hayden* (1869) 102 Mass. 542:

“We must regard the principle as settled, that stock dividends are to be regarded as principal . . .”

Chief Justice Chapman, in *Minot v. Paine* (1868) 99 Mass. 101, said:

“A simple rule is to regard . . . stock dividends, however large, as capital.”

The court, in *Coolidge v. Grant* (1925) 251 Mass. 352, made the following statement:

“Cash dividends, however large, are regarded as income, and stock dividends, however made, as capital.”

Seeing the unfairness of this rule, but feeling compelled by the doctrine of stare decisis to follow it, several Massachusetts courts

have taken pains to justify their actions. In *Rand v. Hubbell* (1874) 115 Mass. 461, the court maintained that:

“It would be impracticable for the courts, in determining the comparative rights of different persons in a particular share of stock, to go behind the votes of the corporation and its directors, and investigate the accounts and affairs of the corporation, in order to ascertain how the corporation acquired the funds out of which the dividend was declared.”

Another defense of the rule was given in *Smith v. Dana* (1905) 77 Conn. 543:

“It was not pretended that this rule, which has been commonly known as the Massachusetts rule, was the ideal rule of reason; nor have the courts of high authority which have given their approval of it ever claimed it to be such, or one which would accomplish exact justice under all circumstances. What has been claimed for it is that its general application, at least if due regard be had for the substance and intention of the transaction, would prove more beneficial in its consequences, and on the whole tend to results more closely approximating to what was just and equitable than would the application of any other rule or any attempt to go behind the declaration of the dividend to search out and discover the equities of each case according to some theoretical ideal.”

Realizing the injustice that would result from a strict adherence to the rule, several Massachusetts courts have dared to ignore the force of precedent and have declined to follow it in certain hard cases. In *Heard v. Eldredge* (1872) 109 Mass. 258, the court said:

“The suggestion that the intention of the directors should determine the question whether the dividend is capital or income can not be correct. . . . It is more safe to look at the character of the property and the transaction.”

The courts in *Gray v. Hemenway* (1912) 212 Mass. 239 and *Smith v. Cotting* (1918) 231 Mass. 42 did not follow the Massachusetts rule.

The Massachusetts rule has the advantage of simplicity and convenience in application. The corporation, by declaring the dividend in the form of stock, decides for the trustee of the estate that the distribution is from capital and consequently goes to the remainderman. The trustee is relieved of the task of applying to the court for instructions as to the method of handling it.

However, in many cases, this arbitrary rule is certain to work great injustice. The corporation may, in the absence of restraining statute, treat all its undivided earnings as capital by issuing stock dividends to represent the increase in surplus. Since, by this rule, the remainderman is entitled to stock dividends, the tenant for life would receive nothing, with the result that the intention of the testator would, in many instances, be defeated. This doctrine confuses capital of the estate with capital of the corporation and when it permits the board of directors of a corporation to decide the ownership of dividends as between life-tenant and remainderman it takes away from the courts the power of dispensing justice after a view and consideration of the facts of the case.

The Kentucky rule in regard to stock dividends declared out of earnings is that they are income and go to the tenant for life regardless of whether such capitalized profits were accumulated before or after the beginning of the trust estate in the stock upon which the distribution is made (*Cox v. Gaulbert* (1912) 148 Ky. 407). In *Hite v. Hite* (1892) 93 Ky. 257, the court said:

“It is the rule as settled by the current of authority that dividends . . . of stock . . . are non-apportionable, and must be considered as accruing in their entirety as of the date when they are declared . . . No inquiry will in such case be made as to what portion of the profit upon which the dividend was based was earned before or after the death of the testator for the purpose of apportioning between the tenant for life and the remainderman. The difficulty attending such an inquiry, the impossibility of attaining accuracy, and of ascertaining the many sources from which the profit has been derived, are the reasons for the rule.”

According to the early English rule, all ordinary stock dividends became the property of the life-tenant and all extraordinary distributions of stock went to the trust fund to be turned over to the remainderman at the death of the life beneficiary (*Brander v. Brander* (1799, Ch.) 4 Ves. Jr. 800). There is no evidence of investigation on the part of the courts to determine whether the profits upon which these dividends were based were earned before or after the life-tenancy began. The reasons for the adoption of such an arbitrary doctrine seem to have been the practical ease of application and the inconvenience of examining the corporation's records. It has been said that at least one English decision im-

plies that its confirmation may have been due to pressure brought by the Bank of England when the court intimated its intention to examine the books of that institution in order to obtain information needed for the purpose of apportioning dividends between rival claimants (*Irving v. Houston* (1803, house of lords) 4 Paton 521). The rule was obviously unfair to the life-tenant, and while it was recognized in England as late as 1856, there were many departures from it even among the earlier cases and at the present time it is practically obsolete in that country.

The modern English doctrine is very similar to the Massachusetts rule. The rights of the life-tenant and the remainderman to a dividend are based on the arbitrary distinction between cash and stock dividends, the former going to the tenant for life if declared after the creation of the trust although they were earned before that time (*Bates v. Mackinley* (1862) 31 Beav. 280) while the latter become the property of the remainderman, except in cases of companies that cannot legally increase their capital stock (*Bouch v. Sproule* (1887, house of lords) 12 App. Cas. 385).

The English jurists maintain that profits of the corporation are not necessarily earnings or income of the trust. The directors have control of the corporation's affairs and they may treat the profits as suitable for distribution in cash or for the increase of capital and their decision is final. Consequently, the corporation, by the form in which it declares the dividend, determines the ownership as between the tenant for life and the remainderman. Vice-chancellor Sir W. Page-Wood, in *Re Barton's Estate* (1868) L. R. 5 Eq. 238, said:

"As long as the company have the profit of the half year in their hands, it is for them to say what they will do with it, subject, of course, to the rules and regulations of the company. . . . The dividend to which a tenant for life is entitled is the dividend which the company chooses to declare. . . . Where the company, by a majority of their votes, have said that they will not divide its money, but turn it all into capital, capital it must be from that time."

The American or Pennsylvania rule seems to be most popular in our country. It is followed by the courts of California, Delaware, Iowa, Maryland, Michigan, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, South Carolina, Tennessee, Vermont, Wisconsin, and Hawaii. The Massachusetts rule is supported by a decision of the United States supreme court

(*Gibbons v. Mahon* (1890) 136 U. S. 549); it has been enacted by statute in Georgia, and is followed by the courts of Connecticut, Illinois, Maine, North Carolina, Ohio, Rhode Island, West Virginia and Wyoming. At the present time, Kentucky is alone in following the rule which bears its name, although up to 1913 it was favored by the courts of New York. As far as the writer has been able to ascertain, the question of ownership of stock dividends as between life-tenant and remainderman has not come before the supreme courts of the states which have not been mentioned.

Variability of Overhead Costs

BY DONALD D. KENNEDY

Overhead costs have increased greatly in amount in the last one hundred years, and especially has this increase been noticeable during the twentieth century. Machinery, which has made possible the vast volume of production characteristic of today's industrial activity, is responsible for this increase, for, with the shift to machinery, certain costs have grown in importance—namely, depreciation, maintenance and repairs to machinery, power and indirect labor. In contrast to direct labor and direct material charges, these costs, which are overhead expenses, exhibit characteristics peculiarly their own. The increase in amount of such expenses has led to many new problems.

Before proceeding further it is wise to establish definitely just what is meant by the term "overhead costs." In the first place, overhead costs apply only to those expenses which are incurred in the production and production-service departments of a company or arise because of the physical formation of the product. In other words, they are expenses of the plant and for the plant. Such costs may be termed shop expenses or factory expenses. Selling expenses and general administrative expenses are thereby excluded. In the second place, overhead costs are indirect charges, and hence do not include direct labor and direct material costs. Overhead costs, therefore, may be defined as indirect factory expenses.

VARIABILITY OF OVERHEAD COSTS

The basic cause of the problems introduced by increased overhead costs is the fact that such costs do not vary directly with production activity—that is, certain plant expenses continue unreduced or only slightly reduced in amount whether the plant is producing at capacity or considerably below capacity. However, it is not correct to say that all the cost elements which constitute overhead are unaffected by changes in production volume. Neither is it true that all overhead costs are partly affected by such changes in plant activity. As a matter of fact, overhead is made up of a large number of different cost items, each one exhibiting

a different relationship to production output. A discussion of the variability of overhead costs is therefore particularly necessary and informative because the various items which comprise such costs exhibit different degrees of variability. An examination of this nature applied to each plant's cost data may yield information about the account classification.

Direct labor cost and direct material cost are directly proportional to business activity, rising and falling in amount with increases and decreases in productive volume. On the other hand, overhead costs do not present this agreement. Overhead comprises a group of items containing indirect labor cost, indirect material cost and general plant costs, all with different degrees of variability. During a short period, such as one year, some of these costs do not vary in amount as the volume of output changes; others do vary in proportion to such changes in production; while still other cost items vary in response to changes in quantity of output. In other words, costs which form a part of overhead fall into three groups: non-variable, semi-variable and variable with respect to production.

All the data upon which the following analysis of variability is based were obtained from a large machine shop which may be called plant J. The figures are to be considered as only illustrative of the condition in the one plant. The period of time over which the material extends is from January, 1924, to May, 1926, or twenty-nine months in all. Consequently, any specific conclusions drawn are applicable only to this one plant and to this period. However, the data suffice to show the method that is to be followed.

First, let us determine the nature of the burden accounts of plant J through a comparison of the crude cost data. The following table presents this material for three different months. The index of productivity used is the number of machine hours during which the plant was in operation each month. Machine hours per month may be defined as the total number of hours all machines were in operation each month. A comparison of the changes from January to February^{vi} will give a rough indication of short-time variation, while a comparison of February amounts with October amounts will indicate variation over a longer period. This also produces a comparison of the January situation with those of the lowest month, February, and the highest month, October, 1925.

TABLE I
The Variability of Overhead Costs

Item	January 1924	February 1924	% Feb. is of Jan.	October 1925	% Oct. is of Feb.
No. of mach. hours.....	23,475.6	18,295.9	78	34,655.0	190
Superintendents.....	\$4,432.44	\$4,407.08	99	\$4,760.50	108
Clerks.....	355.73	324.59	91	314.06	96
Cranemen.....	1,858.55	1,600.64	86	2,779.77	168
Helpers.....	700.00	687.58	98	2,060.98	300
General labor.....	1,699.21	1,421.09	84	1,852.17	130
Inspectors.....	630.68	548.12	86	660.23	120
Chainmen.....	975.19	619.86	63	1,055.08	170
Repairs, lab. and mat....	1,931.40	1,533.63	79	3,093.48	202
Maintenance.....	127.04	356.31	280	194.45	57
Tools, lub. and sup.....	4,409.01	3,324.94	75	4,207.38	127
Fuel for heating.....	179.90	146.13	80	192.41	131
Gen. works exp.....	6,101.38	6,173.18	111	5,679.05	92
Steam.....	997.34	961.56	96	292.51	30
Electric light and pow...	3,937.34	3,778.20	96	4,088.18	109
Yard switching.....	311.30	280.84	90	413.55	147
Taxes.....	2,550.93	2,552.43	100	30,100.00	148
Insurance.....	498.00	498.00	100	532.50	107
Depreciation.....	6,225.00	6,225.00	100	6,500.00	104
Contingent fund.....	469.51	365.92	78	693.10	189

It will be noted that from January to February production dropped from 23,475.6 hours to 18,295.9 hours. In other words, the plant was only 78% as active in February as it was in January. Also it will be noted that from February, 1924, to October, 1925, a period of twenty months, production had increased from 18,295.9 hours to 34,655 hours, or a rise of 90%. Examination of the fluctuations in amounts of expenses in comparison with the change in production shows that there is one group of costs that is not affected by the drop of 22% in production from January to February. Another group is revealed as changing in the same direction and to about the same extent as production changes. Still a third group is only partly affected. These are the fixed, variable and semi-variable groups of expenses. The remainder of the items are peculiar in their variation and call for separate mention. The division of the expenses into these three groups will now be pointed out.

The group of non-variable costs includes superintendents' salaries, taxes, insurance and depreciation. Reduction of 22% in productive activity from January to February resulted in a reduction in superintendents' expense of only 1%, while the other three items remained stationary. When the longer period of twenty

Variability of Overhead Costs

months is examined, it is seen that all the fixed items increased slightly. The greatest rise was an increase of 8% in superintendents' cost. Fixed or non-variable costs, then, do not vary from month to month with changes in productive activity, but do change over longer periods.

The group of variable expenses includes cranemen, helpers, repairs, chainmen, tools and contingent fund. Contingent-fund account contains welfare-work expenses and accident-to-workmen expenses. With a 22% drop in production, cranemen expense dropped 14%, chainmen 37%, repairs 21%, tools 25%, and contingent fund 22%. For this period the item of helpers' cost does not show appreciable change, but examination of changes in other months shows that helpers' expense is directly variable with production. The above items vary with production over the long period as well as over the short one. We may say, then, that these classes of costs are of a directly variable nature.

The group of semi-variable items includes general labor, inspectors, fuel for heating, yard switching and electric light and power. Over both the short and the long periods these costs vary to some extent with production. Thus in the case of general labor a 22% drop in production caused only a 16% drop in the amount of the expense, while a 90% increase in production caused only a 30% increase in the amount of the expense.

In the case of the remaining items, the first one to call for explanation is maintenance. This expense increased 180% when production dropped 22%, and then decreased 43% when production increased 90%. The second item which exhibits peculiar behavior is general works expense, and the third is steam. The explanation lies largely in the nature and accuracy of the classification of accounts. The distinction between maintenance and repairs is a difficult one at best, and the fact that repair costs show the high degree of variation they do while at the same time maintenance costs vary in the opposite direction to production indicates that a logical difference between these two types of costs has not been maintained in plant J. In the case of steam the matter of season is a big factor. In our data, the first two months were in the winter, while the third one was in the fall. General works expense is in itself a conglomeration of separate small expenses for which there is no suitable place in the classification system. Therefore the method of handling these accounts and the classification adhered to explain the peculiarities.

It would be unwise to draw conclusions for this plant from the crude data. To overcome this, the actual cost figures for twenty-nine months have been combined into coefficients of correlation, thus securing a more accurate measure of variation. Since some of the cost items themselves are groups and defy separation into elements, this statistical method will not overcome all difficulty. However, this is true of only a few of the cost accounts, as noted above. For the majority, coefficients of correlation will give better indication of variability through considering the variations of a series of months.

COEFFICIENTS OF CORRELATION

A coefficient of correlation is a ratio expressing in one figure the degree to which two series move together in harmony, move in opposite directions or fail to have any relation to each other in their movements. This is what I desire to show with regard to the various items of overhead costs. The point is that if an expense group is fixed in relation to production output, a coefficient of correlation will show that there is no relation between the two, for if one series is constant and the other varies, they do not move in harmony with each other. Conversely, if both series are variable and move together in the same direction they may be said to move in harmony with each other, and a coefficient of correlation would show the presence of that variability. Therefore, by computing coefficients of correlation between the various expense groups and production activity we may determine more definitely and more accurately the exact items of overhead that are variable, those that are non-variable and those that are semi-variable.

Data used for this computation were obtained from a large machine shop and extended over the full twenty-nine months. The two related series in each case were an expense group on the one hand and the number of machine hours that the shop was in operation on the other. The coefficient of correlation used is the one based on Pearson's formula. By this method, a result of plus 1.00 means perfect direct variation, a result of a minus 1.00 means perfect negative variation, and a result of 0.00 means no variation. A coefficient of above .70 is necessary to show any extent of direct variation. In other words, those items of expense which yield coefficients of above .70 will be variable with respect to productive output; those items with coefficients below .70 will be semi-

Variability of Overhead Costs

variable with respect to production; and those items around .00 will be fixed with respect to output. These figures give a more accurate measure of the non-variability of overhead costs than did those in the preceding section because they include the variations of all twenty-nine months. The table below gives the results.

These coefficients or ratios are based on twenty-nine pairs of figures. The results, therefore, offer fairly substantial proof of the nature of the variability of overhead costs in this plant. Clearly, expense for depreciation, taxes, superintendents, insurance, maintenance and clerks are fixed or non-variable in amount in respect to productive activity, for their coefficients of variation are all very close to 0.00.

TABLE II
Coefficients of variation for the items included in overhead costs

Item	Coefficient of variation	
Depreciation * . . . . .	.00	.00
Taxes * . . . . .	.01	— .25
Superintendents	— .01	
Insurance *	— .06	.33
Maintenance	— .06	
Clerks . . . . .	.05	
Inspectors . . . . .	.12	
Yard switching . . . . .	.15	
General works expense	— .41	
Fuel for heat . . . . .	.48	
Electric light and power . . . . .	.52	
Steam . . . . .	.56	
General indirect labor . . . . .	.62	
Tools, lubricants and supplies . . . . .	.63	
Repairs . . . . .	.66	
Chainmen . . . . .	.81	
Helpers . . . . .	.93	
Cranemen . . . . .	.94	
Contingent fund . . . . .	.99	

The next nine items—inspectors, yard switching, general works expense, fuel for heat, electric light and power, steam, general indirect labor, tools and repairs—having coefficients of variation ranging from .12 to .66, are all semi-variable costs since a coefficient of at least .70 is necessary to indicate direct variation. General works expense is the only item that needs special com-

* These three items were calculated for two twelve-month periods.

ment. The negative coefficient obtained is explained by the miscellaneous nature of this expense class. The last four items—chainmen, helpers, cranemen and contingent fund—are all variable costs, for their coefficients of correlation range from .81 to .99.

The calculation of these coefficients of variation, then, establishes the presence of fixed, semi-variable and variable items of expenditure in overhead costs and indicates to which type each cost item belongs. It goes further and gives a definite measure of the extent of variability in each individual case. Taking the overhead costs for this shop for six months, the proportion which each group bore to the total was ascertained. These results are given in the following table.

TABLE III
The percentage which non-variable, semi-variable, and variable expenses are of the total overhead cost

Group	Per cent. of total
Non-variable.....	35.9
Semi-variable.....	51.1
Variable.....	13.0
Total.....	100.0

Thus 13% of these overhead costs can be said to be variable. On the other hand, 35.9% of the total overhead is fixed or non-variable, and 87% of the total constitutes the fixed and semi-variable groupings. In other words these overhead costs are relatively non-variable with respect to production. The usefulness of determining the variability of overhead cost items through computing coefficients of correlation lies in testing the burden account classifications.

TESTING BURDEN ACCOUNT CLASSIFICATIONS

The elements of manufacturing costs are direct labor, direct material and overhead. A customary method of determining the amount of overhead applicable to any unit of product, in industries in which processes have been mechanized, is to apply a machine-hour rate. Thus, the number of hours of time on each machine required to produce the product is recorded. When the time for each machine is multiplied by the machine-hour rate for the machine, the results added together give the total overhead cost for the unit of product. This presupposes the calculation of

Variability of Overhead Costs

a standard machine rate for overhead. It is on this that attention is to be focused.

The plant is divided into production centers composed of one or more machines. All the elements that go into costs are divided into groups such as depreciation; repairs; tools, lubricants and supplies; crane service; general indirect expenses. The total expense for each of these burden items under standard or normal operating conditions is computed. In making these estimates, past experience of costs of production under full capacity load is vital. The total expense for each burden item is distributed between the production centers according to floor area, power requirements, investment or on some other basis. This cost divided by the normal number of hours the machine should be in operation for the year gives the hourly rate on that machine for that particular burden or cost group. This may be expressed in a formula, each type of expense having a separate one. For instance, consider as an illustration the distribution of the burden account "miscellaneous facilities." The following formula expresses exactly the method.

$$\frac{\text{Am't to be distributed}}{\text{Normal annual prod. (hrs)}} \times \frac{\text{Investment in prod. center}}{\text{Total inv. in machinery}} = \frac{\text{Hourly rate for miscellaneous facilities}}{\text{facilities}}$$

Amount to be distributed is the total yearly cost for the item; normal annual production in hours refers to full capacity operation for the machines of the production center (if only one machine, this would be 2600 hours). Investment figures are in dollars. This formula expresses in another way the fact that the normal yearly cost for miscellaneous facilities multiplied by the ratio between the investment in the production center and the total investment in machinery, and divided by the normal or full capacity production hours of the machine or machines in the production center, gives the hourly machine rate for this particular burden item. The other burden accounts have formulas for their distribution. Then the sum of all the specific rates gives the total hourly machine rate for overhead cost. This is a standard rate which should be realized under full capacity conditions.

Now we come to the crux of the matter. In the operation and construction of the above cost system the following points are evident:

- (1) Overhead costs may be distributed through a standard machine-hour rate.

- (2) These standard rates are built up from burden account groupings or classifications.
- (3) Hourly machine rates so determined are used to calculate unit costs whether the plant is operating at capacity or below capacity.

It can readily be seen that the accuracy of the hourly rates depends on accurate reflection of costs in the burden accounts.

In plant J the following practice was adopted:—If the expense was fixed in nature, its amount under normal operating conditions was calculated and this sum was divided by the normal number of hours of operation (2600 for one machine). However, very few of the cost items were of this nature. (See table II.) If the expense were not fixed, its amount was determined by averaging the costs for the previous three to five years and dividing the average so obtained by the average number of hours the machine was in operation over the same period, to produce the hourly machine rate. (It is understood, of course, that these were years which approached normal operating conditions.) It is absolutely essential that these costs truly reflect normal conditions. Generally it has been taken for granted, unless outstanding policy changes or other events indicate otherwise, that average costs for several years will closely approximate true normal costs if those years approach full capacity operation.

Now we have a further test to apply in the calculation of coefficients of variation. It has already been shown that overhead cost items are fixed, semi-variable and variable in nature. It is normal that these items should exhibit such tendencies. On the other hand it is hardly normal that any production cost should be low when production is high and high when production is low. To illustrate, table II shows that general works expense has a coefficient of variation of $-.41$. This means that general works expense, for the period examined, is semi-variable, but in the opposite direction to production, i. e., that it was high in amount when production was low and, vice versa, that it was low in amount when production was high. The effect of this situation on standard machine-hour rates for overhead, if these were calculated from data which included the above, is immediately discernible. Rates slightly lower than normal will be obtained, other things being equal. Then at times of low production less than the proportionate share of overhead will be distributed, and more than a proportionate share of cost will find its way into the

unallocated classification. Testing through coefficients of correlation will reveal those cost items which are not normal in their variation and must be investigated to determine what true normal cost should be. It is only in using true normal costs in burden accounts that true standard machine rates can be computed.

Coefficients of variation may also be calculated as a regular testing procedure to determine whether the various cost items have maintained their established relationship compared to productive activity or their variation has changed to any considerable degree. Marked differences in coefficients of variation for the same cost group for different periods should lead immediately to investigation of causes. It is proverbial that low production in a machine industry is costly because overhead costs are relatively fixed in amount. We have seen that individual cost items included in overhead are not only fixed, but to a greater extent are semi-variable and variable. It is vitally important, in order that sub-normal production be as economical as possible, that the variable cost items remain variable and that the semi-variable cost items shall not tend towards the fixed grouping. This is true because the more variable is overhead cost, the lower are idle capacity costs. Any tendency in this direction would be indicated by the coefficient of variation.

Thus, the indirect expense for chainmen is a variable overhead having a coefficient of .81. This means that this cost item varies with production, and consequently gives little idle capacity cost. If in a subsequent period a coefficient for chainmen cost of .50 is obtained, then it is evident that this expense has become semi-variable with the result that idle capacity costs are greater and profits lower. Immediate checking should enable the plant manager to return this item to the variable group. Similarly, tools, lubricants and supplies cost is semi-variable with a coefficient of .63. If, later, this coefficient should change to .40 it would indicate that these costs have become more fixed than is normal, with increasing idle capacity cost, and that it should be possible to make them more variable as indicated by the former condition.

Just as fixed costs make idle capacity costs greater, the converse is true that more variable costs give lower idle capacity costs. Therefore the obtaining of a higher coefficient of variation for any cost item, meaning greater variability, indicates a favorable condition. It is through the obtaining of costs which are more variable that sub-normal operation can be made more economical.

Briefly, then, overhead can not be considered as a unit in its relation to costs at times of variable productive output. Included in overhead are variable, semi-variable and fixed costs. When production drops below standard, fixed costs give rising average unit costs, semi-variable overhead yields rising average unit costs but not to a proportionate extent, and variable overhead has no effect on average unit costs. The grouping of the various cost items into these categories may be determined by direct comparison of the data or by calculation of coefficients of correlation. Such comparisons are useful in checking the normalcy of the cost data for use in computing standard overhead rates and for controlling expenditures. Only through detailed and effective control of expenses is it possible to realize minimum costs under conditions of variable production as well as at times of normal activity.

Students' Department

H. P. BAUMANN, *Editor*

AMERICAN INSTITUTE EXAMINATIONS

[NOTE.—The fact that these solutions appear in THE JOURNAL OF ACCOUNTANCY should not cause the reader to assume that they are the official solutions of the board of examiners. They represent merely the opinions of the editor of the *Students' Department*.]

EXAMINATION IN ACCOUNTING THEORY AND PRACTICE—PART II

November 15, 1929, 1 P. M. to 6 P. M.

The candidate must answer all the following questions.

No. 1 (38 points):

From the data following, you are required to prepare an accounting for the trustees (three brothers, hereinafter mentioned), for the year ended December 31, 1928, embodying (a) a statement of cash receipts and disbursements and (b) a schedule of the payments of principal and income to each beneficiary.

James DeBritt died March 1, 1906. By the terms of his will, the estate was to be divided into seven equal parts as follows:

One seventh to the widow (Jane DeBritt) to be held in trust during her lifetime, with power to will the principal; all income from her share to be paid to her direct. One seventh to each of three daughters—Alma DeBritt McMahon (married), Mira and Susan (both single); each share to be held in trust under the same conditions as the widow's, all income therefrom to be paid to each. One seventh to each of three sons (appointed trustees)—James, Andrew and Herbert; each of these shares was to be divided into two equal parts, one to be a trust fund under the same conditions and terms as the widow's full share, the other to be paid to them outright.

At the date of his death, the testator owned 15,000 acres of unimproved land on Long Island. This land could not be sold except at a great sacrifice, so the trustees received permission from the surrogate to continue the operation of the estate until a satisfactory sale of the property could be made. The surrogate further ruled that all taxes paid on this property should be added to its value and not treated as an expense chargeable to income. By an expert appraisal, as at March 1, 1913, this land was valued at \$1,160 an acre.

The total value of the estate at the date of death of the testator, as shown by the appraisal for inheritance-tax purposes, was \$2,800,000 which included a value of \$840,000 on the Long Island real estate. On the basis of this appraisal, each of the sons was entitled to receive, on account of his free fund, the sum of \$200,000.

On November 1, 1911, Alma DeB. McMahon (the married daughter) died, widowed and without issue. Her entire estate consisted of her share in her father's estate. In her will, she made several specific bequests amounting to \$350,000. These were paid by the trustees of the estate of James DeBritt and charged to her share as advances. The balance was left to her brothers and sisters in equal shares.

On December 31, 1927, an intermediate accounting was made to the surrogate. All expenses and commissions were paid to this date and all income was distributed to beneficiaries as stipulated.

The following assets remained (all securities having been purchased at par):

Cash in bank	\$ 20,000
Office building in New York, inventoried at	340,000
Apartment house in New York, inventoried at	280,000
15,000 acres of Long Island property, on which taxes and assessments, amounting to \$39,300, had been paid to March 1, 1913, and \$88,200 from March 1, 1913, to December 31, 1927, making its book value, as at the latter date	967,500

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New York City 5 per cent. corporate stock, par value.....	\$330,000
U. S. government farm-loan bonds, 4 per cent., par value.....	200,000
Foreign government 5 per cent. bonds.....	100,000
Railroad and industrial 5 per cent. bonds, on which a 2 per cent. tax is paid at the source.....	420,000
4,000 shares of 7 per cent. preferred stock of American Metals Co. (par value \$100).....	400,000

Advances on account of beneficiaries' free fund shares, at December 31, 1927, were as follows: James, \$250,000; Andrew, \$325,000; Herbert, \$300,000; and of the estate of Alma DeB. McMahon, \$350,000.

The trustees' transactions during the year 1928, were as follows:

On June 30th, 5,000 acres of the Long Island property were sold for \$10,-000,000, net, i.e., after all commissions and adjustments had been deducted. The sale was made to the R. E. Development Co. which paid 40 per cent cash, the balance remaining on mortgage at 6 per cent. until sales of the property were made in individual plots, when substituted first mortgages were to be taken by the estate for 50 per cent. of the mortgage released and the balance in cash. On September 30th, \$250,000 of substituted first mortgages were received, bearing interest at 6 per cent., payable quarterly, commencing December 31, 1928.

Regular dividends were received on the shares of stock owned.

Rents received from office building during the year were \$54,000 and the attendant expenses were wages \$12,000, repairs, etc., \$6,000 and taxes \$2,000.

Rents received from the apartment house during the year were \$48,000 and the attendant expenses were wages \$14,500, repairs, etc. \$4,000 and taxes \$1,500.

Interest received on bank balances, apart from other interest, was \$66,750.

Taxes on unimproved property, amounting to \$10,500 for the full year of 1928, were paid in March, 1928.

The general operating expenses of the estate were \$12,500 for the year.

Interest on advances to the beneficiaries is to be charged at the rate of 6 per cent. per annum.

In lieu of commissions, for services during the year 1928, the trustees received \$25,410, which was divided among them equally.

On December 30, 1928, the trustees paid the net income due to each beneficiary. They then decided that they were in a position to make further payments, on account of principal, to those beneficiaries entitled thereto, and proceeded to distribute the sum of \$2,650,000 in accordance with this decision.

The final transaction for the year 1928 was the investment of \$1,500,000 in U. S. government farm-loan, 4 per cent. bonds at par.

Solution:

Exhibit A

ESTATE OF JAMES DEBRITT

Charge and discharge statement as to principal for the year
ended December 31, 1928

We charge ourselves with:

Inventory of assets at January 1, 1928 (schedule A).....	\$ 4,282,500.00
Gain on realization (schedule B).....	9,674,000.00
	<hr/>
Total charges.....	\$13,956,500.00
Less—Federal tax liability (schedule C).....	520,887.50
	<hr/>
Balance as to principal.....	\$13,435,612.50

The following working papers (schedule A) show the inventory of the assets of the estate as at January 1, 1928, the changes during the year, and the status of the principal at the end of the year.

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Schedule A

ESTATE OF JAMES DEBRITT

Working trial balance for the year ended December 31, 1928

Particulars	January 1, 1928		Changes for year		December 31, 1928	
	Debit	Credit	Debit	Credit	Debit	Credit
Cash in bank principal.....	\$ 20,000.00		(1) \$ 4,250,000.00	(1) \$ 4,160,500.00	\$ 109,500.00	
Cash in bank income.....			(1) 497,000.00	(1) 497,000.00		
Office building in New York.....	340,000.00				340,000.00	
Apartment house—New York.....	280,000.00				280,000.00	
Long Island acreage.....	967,500.00				967,500.00	
New York City 5% corporate stock.....	330,000.00		(2) 10,500.00	(3) 326,000.00	320,000.00	
U. S. government farm-loan bonds 4%.....	200,000.00		(6) 1,500,000.00		1,300,000.00	
Foreign government 5% bonds.....	100,000.00				100,000.00	
Railroad and industrial 5% bonds.....	420,000.00				420,000.00	
American Metals Co. 7% preferred stock.....	400,000.00				400,000.00	
First mortgage on real estate.....			(7) 6,000,000.00	(8) 500,000.00	5,500,000.00	
Substitute first mortgages.....			(9) 250,000.00		250,000.00	
Federal tax liability.....						\$520,887.50
Principal advanced James DeBritt.....	250,000.00		(11) 525,000.00	(10) 520,887.50	775,000.00	
Principal advanced Andrew DeBritt.....	325,000.00		(11) 450,000.00		775,000.00	
Principal advanced Herbert DeBritt.....	300,000.00		(11) 475,000.00		775,000.00	
Principal advanced Alma DeB. McMahon estate.....	350,000.00		(11) 1,200,000.00		1,550,000.00	
James DeBritt free estate.....		\$305,892.85		(12) 653,793.76		959,686.61
Andrew DeBritt free estate.....		305,892.86		(12) 653,793.74		959,686.60
Herbert DeBritt free estate.....		305,892.85		(12) 653,793.74		959,686.60
Herbert DeBritt free estate.....		305,892.86		(12) 653,793.76		959,686.61
Alma DeB. McMahon estate.....		611,785.72		(12) 1,307,587.49		959,686.60
Jane DeBritt trust estate.....		611,785.72		(12) 1,307,587.50		1,919,373.21
Mira DeBritt trust estate.....		611,785.72		(12) 1,307,587.50		1,919,373.22
Susan DeBritt trust estate.....		611,785.71		(12) 1,307,587.51		1,919,373.22
	\$4,282,500.00	\$4,282,500.00	\$15,157,500.00	\$15,157,500.00	\$13,956,500.00	\$13,956,500.00

(1) Per cash receipts and disbursements—exhibit C.

(2) Real estate taxes paid.

(3) Cost of 5,000 acres sold.

(6) Purchased.

(7) Received on sale of real estate.

(8) Paid in cash and substitute mortgages.

(9) Substitute mortgages.

(10) Income tax on sale of land.

(11) Principal advances during year—schedule E.

(12) Increase in estate resulting from excess received from sale of 5,000 acres of land at a price in excess of its inventory value.

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Schedule B

ESTATE OF JAMES DeBRITT

Gain on sale of 5,000 acres of Long Island property (sold June 30, 1928)

Realized:

Cash	\$ 4,250,000.00
Mortgage at 6%	5,500,000.00
Substitute first mortgage	250,000.00
Total	<u>\$10,000,000.00</u>

Value of land sold:

Value of 15,000 acres at January 1, 1928 ..	\$967,500.00
Taxes on property, paid during 1928	10,500.00
Value of 15,000 acres at June 30, 1928	<u>\$978,000.00</u>

Value of 5,000 acres sold	326,000.00
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Gain on sale of 5,000 acres, before provision for federal tax ..	<u>\$ 9,674,000.00</u>
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Schedule C

Computation of income-tax liability on sale of Long Island property

Sales price	\$10,000,000.00
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Cost:

Value of 15,000 acres at March 1, 1913	<u>\$17,400,000.00</u>
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Value of 5,000 acres	\$5,800,000.00
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Taxes paid since

March 1, 1913:

Previous years	\$88,200.00
Current year	10,500.00

Total on 15,000 acres	<u>\$98,700.00</u>
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Amount applicable to 5,000 acres	32,900.00	5,832,900.00
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Taxable gain	<u>\$4,167,100.00</u>
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Tax—computed as a capital net gain, taxable at 12½ per cent.	<u>\$ 520,887.50</u>
-------------------------------------------------------------------	----------------------

Exhibit B

ESTATE OF JAMES DeBRITT

Charge and discharge statement as to income for the year ended

December 31, 1928

We charge ourselves with:

Interest:

On mortgage on Long Island property:

On releases	\$ 7,500
On mortgages	165,000
On substitute mortgages	3,750
	<u>\$176,250</u>

Students' Department

	<i>Forward</i>	\$176,250	
On U. S. government farm loan bonds, 4%		8,000	
On foreign government 5% bonds		5,000	
On railroad and industrial 5% bonds . .		21,000	
On bank balances		66,750	
On advances to beneficiaries:			
James DeBritt	\$ 15,000		
Andrew DeBritt	19,500		
Herbert DeBritt	18,000		
Alma DeB. McMahon	21,000	73,500	
			\$350,500
Dividends:			
On New York City 5% corporate stock . .	\$ 16,500		
On American Metals Co. 7% preferred . .	28,000		
			44,500
Office building income:			
Rents received	\$54,000		
Expenses:			
Wages	\$ 12,000		
Repairs	6,000		
Taxes	2,000	20,000	
			34,000
Apartment-house income:			
Rents received	\$ 48,000		
Expenses:			
Wages	\$ 14,500		
Repairs	4,000		
Taxes	1,500	20,000	28,000
Total			\$457,000
We credit ourselves with:			
General operating expenses	\$ 12,500		
Trustees' fees	25,410	37,910	
Distributed to beneficiaries (schedule D)			\$419,090

Schedule D

ESTATE OF JAMES DEBRITT

--Statement of income payments to beneficiaries, December 31, 1928

Distributed net income per exhibit B. \$419,090

Which is distributed to—

	Share of Beneficiaries Alma DeB.		
	own share	McMahon	Total
James DeBritt	\$ 59,870	\$ 11,974	\$ 71,844
Andrew DeBritt	59,870	11,974	71,844
Herbert DeBritt	59,870	11,974	71,844
Alma DeB. McMahon	59,870	59,870	

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Jane DeBritt	\$ 59,870		\$ 59,870
Mira DeBritt	59,870	\$ 11,974	71,844
Susan DeBritt	59,870	11,974	71,844
	<u>\$419,090</u>	<u>\$</u>	<u>\$419,090</u>
Total distribution			<u>\$419,090</u>
Income balance			<u>None</u>

Schedule E

ESTATE OF JAMES DEBRITT

Statement of principal payments to beneficiaries, December 31, 1928

Amount to be distributed	\$2,650,000
Which should be distributed to—	

	Beneficiaries own free estate	Alma DeB. McMahon free estate	Total
James DeBritt	* \$ 525,000	\$240,000	\$765,000
Andrew DeBritt	450,000	240,000	690,000
Herbert DeBritt	475,000	240,000	715,000
Alma DeB. McMahon	1,200,000	1,200,000	
Mira DeBritt		240,000	240,000
Susan DeBritt		240,000	240,000
	<u>\$2,650,000</u>	<u>\$</u>	<u>\$2,650,000</u>

Total distribution	\$2,650,000
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* Payments made to equalize previous distribution.

Exhibit C
Sheet 1

ESTATE OF JAMES DEBRITT

Statement of cash receipts for the year ended December 31, 1928

Particulars	Total	Principal	Income
Balance, January 1, 1928	\$ 20,000	\$ 20,000	
Sale of Long Island property	4,000,000	4,000,000	
Cash received to release mortgage on Long Island property	250,000	250,000	
Interest on mortgage released \$500,000.00 at 6%—3 months	7,500		\$ 7,500
Interest on mortgage 6/30 to 12/31 at 6% on \$5,500,000.00	165,000		165,000
Interest on substituted mortgages 9/30 to 12/30 at 6% on \$250,000.00	3,750		3,750
Dividend on 5% corporate stock New York City	16,500		16,500

Students' Department

Interest on U. S. government farm-loan bonds at 4%.....	\$ 8,000	\$ 8,000
Interest on foreign government 5% bonds...	5,000	5,000
Interest on R. R. and industrial 5% bonds..	21,000	21,000
Dividends on American Metals Co. 7% pre- ferred stock.....	28,000	28,000
Rents received—office building.....	54,000	54,000
Rents received—apartment house.....	48,000	48,000
Interest on bank balances.....	66,750	66,750
Interest collected from beneficiaries on advances—		
James DeBritt.....	15,000	15,000
Andrew DeBritt.....	19,500	19,500
Herbert DeBritt.....	18,000	18,000
Alma DeB. McMahon.....	21,000	21,000
Total.....	<u>\$4,767,000</u>	<u>\$4,270,000</u> <u>\$497,000</u>

Exhibit C
Sheet 2

ESTATE OF JAMES DEBRITT

Statement of cash disbursements for the year ended December 31, 1928

	Total	Principal	Income
Office building—			
Wages.....	\$ 12,000		\$ 12,000
Repairs.....	6,000		6,000
Taxes.....	2,000		2,000
Apartment-house expense—			
Wages.....	14,500		14,500
Repairs.....	4,000		4,000
Taxes.....	1,500		1,500
Taxes on unimproved real estate.....	10,500	\$ 10,500	
General operating expenses for 1928.....	12,500		12,500
Trustees' compensation.....	25,410		25,410
Investment in U. S. government farm-loan 4% bonds at par.....	1,500,000	1,500,000	
Income payments to beneficiaries—			
James DeBritt.....	71,844		71,844
Andrew DeBritt.....	71,844		71,844
Herbert DeBritt.....	71,844		71,844
Jane DeBritt.....	59,870		59,870
Mira DeBritt.....	71,844		71,844
Susan DeBritt.....	71,844		71,844
Advances of principal beneficiaries (schedule E)—			
James DeBritt on own account.....	525,000	525,000	
Andrew DeBritt on own account.....	450,000	450,000	
Herbert DeBritt on own account.....	475,000	475,000	

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Alma DeB. McMahon:

To James DeBritt	\$ 240,000	\$ 240,000	
Andrew DeBritt	240,000	240,000	
Herbert DeBritt	240,000	240,000	
Mira DeBritt	240,000	240,000	
Susan DeBritt	240,000	240,000	
Total disbursements	\$4,657,500	\$4,160,500	\$497,000
Closing balance	109,500	109,500	None
Total	\$4,767,000	\$4,270,000	\$497,000

No. 2 (27 points):

Following is the trial balance of Filbert & Company, Inc., December 31, 1928, before closing:

Accounts payable		\$ 38,296
Accounts receivable	\$ 46,914	
Administrative salaries	10,000	
Advertising	7,800	
Auto expense—salesmen	450	
Bad debts	2,784	
Branch store—account current	21,505	
Capital stock		250,000
Cash in office	1,685	
Discounts allowed	128	
Discounts taken		7,554
First National bank account	48,423	
Freight inward—merchandise	19,544	
Freight outward and delivery	2,118	
Furniture and fixtures	43,420	
Insurance, fire—merchandise	3,000	
Interest	600	
Inventory—January 1, 1928	218,932	
Life insurance—manager	1,520	
Notes payable		50,000
Notes receivable	3,575	
Office salaries and expenses	8,800	
Purchases—merchandise	401,004	
Rent	7,200	
Sales—merchandise		492,515
Salespeople—wages	28,960	
Store—general expenses	7,285	
Surplus—January 1, 1928		53,954
Taxes—personal property	3,200	
Wrapping and shipping	3,472	
	\$892,319	\$892,319

On January 1, 1929, before the stock-taking could be completed, a fire occurred, resulting in such damage to merchandise that it was impossible to determine accurately the value thereof. It is known, however, that sales realize a gross profit of 20 per cent. or 25 per cent. on cost of sales (freight inward included). Wrapping supplies on hand (undamaged) were valued at \$572.

Ten per cent. is to be charged for depreciation of furniture and fixtures.

Students' Department

From the branch-store books, the following is gathered:

January 1, 1928—Cash on hand \$1,000, merchandise inventory \$27,005 and furniture and fixtures \$3,500. During the year 1928, the merchandise purchases were \$83,290, sales \$108,769, expenses \$12,768 and cash remittances to main store \$10,000. Bad debts written off were \$25.

Depreciation of furniture is to be computed at 10 per cent.

On December 31, 1928, the cash on hand was \$1,986, merchandise inventory \$23,280 and accounts receivable (good) \$1,700.

You are required to close the books, present balance-sheet, profit-and-loss account and inventory of merchandise, placing the branch-store account current at December 31, 1928, on the main-store books and setting up a reserve for federal income tax.

Solution:

The inventory on hand at the home office may be estimated by the gross-profit method, as follows:

FILBERT & COMPANY, INC.

Statement showing computation of inventory December 31, 1928

Inventory, at January 1, 1928.....		\$218,932
<i>Add:</i>		
Purchases.....	\$401,004	
Freight inward—merchandise.....	19,544	420,548
Total.....		\$639,480
<i>Less: estimated cost of sales for the year ended December 31, 1928:</i>		
Sales.....	\$492,515	
<i>Less: estimated gross profit—20%</i>	98,503	394,012
Estimated cost of inventory.....		\$245,468

Adjusting and closing entries—Home office at December 31, 1928

Merchandise inventory, December 31, 1928.....	\$245,468	
Profit and loss.....		\$245,468
To record the estimated value of the inventory of merchandise on hand December 31, 1928.		
Wrapping supplies on hand.....	572	
Wrapping and shipping.....		572
To record inventory of wrapping supplies on hand December 31, 1928.		
Depreciation on furniture and fixtures.....	4,342	
Reserve for depreciation— furniture and fixtures.....		4,342
To write off depreciation for the year 1928.		
Book value.....	\$43,420	
10% thereof.....	4,342	

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Profit and loss	\$110,631.00	
Administrative salaries		\$ 10,000.00
Advertising		7,800.00
Auto expense—salesmen		450.00
Bad debts		2,784.00
Discounts allowed		128.00
Freight inward—merchandise		19,544.00
Freight outward and delivery		2,118.00
Insurance, fire—merchandise		3,000.00
Interest		600.00
Life insurance—manager		1,520.00
Depreciation—furniture and fixtures		4,342.00
Office salaries and expenses		8,800.00
Rent		7,200.00
Salespeople—wages		28,960.00
Store—general expenses		7,285.00
Taxes—personal property		3,200.00
Wrapping and shipping		2,900.00
To transfer expenses for the year to profit and loss.		
Profit and loss	374,468.00	
Inventory—January 1, 1928		218,932.00
Purchases—merchandise		155,536.00
To transfer inventory, January 1, 1928 and balance in purchase—merchandise accounts to profit and loss.		
Sales	492,515.00	
Discounts taken	7,554.00	
Profit and loss		500,069.00
To transfer sales and discounts taken to profit and loss.		
Profit and loss	14,970.00	
Surplus		14,970.00
To transfer profit of home office for the year 1928 to surplus account.		
Branch store—current account	8,611.00	
Surplus		8,611.00
To record the profit of the branch for the year 1928.		
Surplus	2,753.12	
Federal income tax payable		2,753.12
To set up liability for federal income tax for 1928.		
Combined profit per books	\$23,581.00	
Add non-deductible item of life insurance—manager	1,520.00	
Taxable income	\$25,101.00	

Students' Department

Less: statutory credit	\$ 3,000.00
Taxable income	<u>\$22,101.00</u>
Tax at 12%	\$ 2,652.12
Add: income in excess of \$25,000.	101.00
Tax liability	<u>\$ 2,753.12</u>

FILBERT AND COMPANY, INC.

Combined profit-and-loss statements for the year ended December 31, 1928

	Home Office	Branch	Combined Profit and Loss
Sales	\$492,515	\$108,769	\$601,284
Deduct cost of goods sold:			
Inventory, January 1, 1928	\$218,932	\$ 27,005	\$245,937
Purchases—merchandise	401,004	83,290	484,294
Freight inward—merchandise	19,544		19,544
Total	<u>\$639,480</u>	<u>\$110,295</u>	<u>\$749,775</u>
Less: inventory, December 31, 1928	245,468	23,280	268,748
Cost of goods sold	<u>394,012</u>	<u>87,015</u>	<u>481,027</u>
Gross profit	\$ 98,503	\$ 21,754	\$120,257
Deduct expenses:			
Administrative salaries	\$ 10,000		\$ 10,000
Advertising	7,800		7,800
Auto expense—salesmen	450		450
Bad debts	2,784	25	2,809
Depreciation—furniture and fixtures	4,342	350	4,692
Freight outward and delivery	2,118		2,118
Insurance, fire—merchandise	3,000		3,000
Life insurance—manager	1,520		1,520
Office salaries and expenses	8,800		8,800
Rent	7,200		7,200
Salespeople—wages	28,960		28,960
Store—general expenses	7,285		7,285
Taxes—personal property	3,200		3,200
Wrapping and shipping	2,900		2,900
Branch expenses		12,768	12,768
Total	<u>90,359</u>	<u>13,143</u>	<u>103,502</u>
Profits from operations	\$ 8,144	\$ 8,611	\$ 16,755
Discounts earned	7,554		7,554
Total	<u>\$ 15,698</u>	<u>\$ 8,611</u>	<u>\$ 24,309</u>
Other expenses:			
Discounts allowed	\$ 128		\$ 128
Interest paid	600		600
Total other expenses	<u>728</u>	<u></u>	<u>728</u>
Net profit before provision for federal income taxes	<u>\$ 14,970</u>	<u>\$ 8,611</u>	<u>\$ 23,581</u>

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FILBERT AND COMPANY, INC.

Combined balance-sheet (working papers) December 31, 1928

<i>Assets</i>	Home office	Branch	Elimina- tions	Combined balance- sheet
Cash in office.....	\$ 1,685.00	\$ 1,986.00		\$ 3,671.00
First National bank account	48,423.00			48,423.00
Accounts receivable.....	46,914.00	1,700.00		48,614.00
Notes receivable.....	3,575.00			3,575.00
Merchandise inventory.....	245,468.00	23,280.00		268,748.00
Wrapping supplies on hand.....	572.00			572.00
Furniture and fixtures.....	43,420.00	3,500.00		46,920.00
Branch store—current account	30,116.00		\$30,116.00	
Total Assets.....	\$420,173.00	\$30,466.00	\$30,116.00	\$420,523.00
<i>Liabilities and net worth</i>				
Federal income tax payable.....	\$ 2,753.12			\$ 2,753.12
Accounts payable.....	38,296.00			38,296.00
Notes payable.....	50,000.00			50,000.00
Reserve for depreciation—furniture and fixtures.....	4,342.00	\$ 350.00		4,692.00
Capital stock.....	250,000.00			250,000.00
Surplus.....	74,781.88			74,781.88
Home office—current account		30,116.00	\$30,116.00	
Total liabilities and net worth ..	\$420,173.00	\$30,466.00	\$30,116.00	\$420,523.00

FILBERT AND COMPANY, INC.

Balance-sheet—December 31, 1928

Assets

Current assets:

Cash:

In office.....	\$ 1,685.00	
At branch.....	1,986.00	
First National Bank.....	48,423.00	\$ 52,094.00

Receivables:

Customers.....	\$48,614.00	
Notes.....	3,575.00	52,189.00

Merchandise inventory..... 268,748.00 \$373,031.00

Wrapping supplies on hand..... 572.00

Furniture and fixtures (less deprecia-
tion)..... 42,228.00

\$415,831.00

Students' Department

Liabilities and net worth

Current liabilities:

Federal income tax payable.....	\$ 2,753.12		
Accounts payable.....	38,296.00		
Notes payable.....	50,000.00	\$ 91,049.12	

Net worth:

Capital stock.....	\$250,000.00		
Surplus—January 1, 1928.....	\$53,954.00		
Add: profits for the year, 1928.....	23,581.00		
Total.....	\$77,535.00		
Less—provision for federal income taxes for 1928.....	2,753.12	74,781.88	324,781.88
			<u>\$415,831.00</u>

Book Reviews

INDUSTRIAL BALANCE SHEETS, by MYRON M. STRAIN. *Harper & Brothers*, Publishers. 182 pages.

Industrial Balance Sheets discusses the accepted principles of statement analysis and the extent to which their application has proved useful. The first chapters deal in a lucid way with the materials of the balance-sheet, broadly classified as to assets, liabilities and reserves of the usual kind and the customary segregations of the net worth. The remark is made at the outset that "analyzing a balance-sheet that is itself inaccurate is simply so much labor lost. There is only one safe and reasonably certain way to assure a statement's being dependable and that is to have affixed to it the certificate of a public accountant. This certificate should not be regarded in itself as a hall-mark of accuracy—it is simply a statement by a qualified expert of the extent to which a report may be relied upon. . . . That is not to say that there are no incompetent certified public accountants. The profession is afflicted by Providence with the same deficiencies and defects as those under which all the other professions labor and its practitioners are similarly tainted by original sin and human imbecility."

The reviewer permits himself this rather long quotation so as to show in the author's own words his well disposed appraisal of the public accountant's services.

After citing some cases of window dressing such as frequently come to light when applying the ordinary methods of verification and audit, the author deals with the general subject of verifying assets and liabilities, though naturally from the analyst's and credit-man's position.

The need of more uniform terminology and the importance of proper and uniform classification are discussed, and a skeleton balance-sheet is given. It is of interest to note here that prepaid expenses "which diminish the outgo of cash in the immediate future for operating purposes" are included among the current assets. That treatment is further explained in one of the early chapters.

The three first chapters of the book are really an introduction. The remainder deals with the subject of analysis proper. The fourth chapter commences with suggestions concerning the approach to the examination of financial statements—not as a "prosecuting attorney" but as a "judge on the bench," and, after a discussion of the "worst possible view" method, proceeds with a comprehensive presentation of ratio analysis, standard measurements and requirements.

In the succeeding chapters the use of ratios is further explained. Various "internal," "external" and "efficiency" tests are introduced that will serve to shed light on the formal relations between the types of assets and liabilities and on the earning capacity. A note of warning is sounded, however, against placing too great a reliance upon them. An interesting example is given of a concern whose balance-sheet shows most respectable ratios. Certain "informal indicators," however, point to less favorable conditions that call for further investigation. They change the favorable first impression to one of doubt and final distrust.

On the whole a good case is made out for the assumption that general rules do not apply to individual instances. Each balance-sheet has to be judged upon its own merits and the customary ratio analysis does not produce all the information sought by credit man or analyst. By means of interesting examples it is shown why ratios should vary in different classes of business and under different conditions and how they will occasionally show great seasonal variations in the same business. Granting its obvious limitations the author believes that ratio analysis is "genuinely useful in indicating probabilities and suggesting weaknesses, but not in taking the place of good judgment or in displaying certainties." He chooses eight formal ratio relations "that will not deceive us into attaching importance to meaningless figures," viz.:

Four internal relations

1. Current assets to current liabilities .
2. Quick assets to current liabilities .
3. Net worth to debt .
4. Permanent capital to non-current assets .

Two test ratios

1. Sales to receivables .
2. Sales to inventories .

Two efficiency ratios

1. Sales to fixed assets .
2. Sales to total assets .

He also discusses the "informal indicators" to be used in cases where certain definite information is not available, as, for instance, (1) cash position; comparison of (2) accounts and notes receivable, (3) inventories and receivables; (4) fixed assets as credit resource; (5) depreciation reserves; (6) entangling alliances with affiliated corporations; (7) comparison of accounts payable with inventory; (8) comparison of accounts and notes payable; (9) security for notes payable; (10) provision for expenses accrued; and (11) earning capacity as indicated by surplus.

The author expresses his high estimate of accountants' reports and proposes that "pro-forma credit applications and report requests eliminate entirely the more senseless parts of their questionnaires and boldly substitute the condensed profit-and-loss form . . . with the reconciliation of surplus. . . ." He observes that such information will give much better data on the financial position and permit the substitution of the above test and efficiency ratios by the following definitely ascertainable and more relevant facts:

1. Age of receivables .
2. Turnover of inventory .
3. Net profit per cent. of total investment
4. Net profit per cent. of net worth

Finally the author recommends comparison of periodical figures and of their analyses, and also of trend analyses as "one of the most useful of analytical devices." Each of the items of a concern's balance-sheet is to be given the index number 100. The assets and liabilities on, say, the next year's statement are divided by the corresponding items on the first, which remain the standard or base. This produces an index which from year to year exhibits

certain trends and tendencies. He believes the periodical accounts of a concern, after they have been condensed or otherwise cast in a suitable form, as well as the ratios and trends, well worth preserving, and considers the comparative analysis record as a valuable addition to each customer's credit file. The text includes illustrative examples and each chapter is followed by apposite questions and problems. The book is primarily intended for the credit-man or the analyst but the student of accountancy and also the practitioner will find in it much that will prove of benefit and interest.

A. VAN OSS.

CONDITIONAL SALES, by ROGER SHERMAN HOAR. *The Ronald Press Co.*, New York. 521 pages.

Conditional Sales should be on the desk of every person who has anything to do, in a practical way, with instalment selling or buying. Perhaps this is as far as a book review need go because what follows is, after all, merely a statement of the grounds upon which the opinion is based. It may be helpful, however, to outline the scope of the book and to point out the author's method of presenting his subject. The widespread extent of instalment selling and the importance of protection to both seller and buyer are obvious. It is equally obvious that such selling in the majority of its instances crosses state lines and involves the law of more than one jurisdiction.

In the first chapter, the nature of conditional sales is explained and the author points out that conditional sales are usually but not necessarily instalment sales. The condition, a breach of which would enable the seller to retake, may be the maintaining of insurance on the property, the keeping of it within a certain county, or any other requirement not directly connected with the payment of the purchase price. The legal requirements for recording chattel mortgages do not apply to conditional sales, but when an instrument, drawn as a lease but used as a conditional sale, is recorded as a chattel mortgage, the seller may lose his goods to attaching creditors of the buyer. The legal status of conditional sales in every one of the states and the District of Columbia is outlined in chapter II. Chapter III discusses the question of how uniform is a uniform act when one state has both a uniform conditional sales act and a uniform sales act which legalizes conditional sales, and when courts even of the same state differ in their interpretations. The former statute is printed and discussed in chapter IV; the latter in chapter V.

The remaining chapters deal, in a thorough but interesting way, with an ample citation of decisions, with the law and practice underlying every step from the drafting of the contract to collection or foreclosure. On the more important steps, the law of each state and the District of Columbia is summarized separately. How the property shall be described, the formalities of executing, filing and recording the contract, the rights of third parties, assignments, resales, removals, auctions, bankruptcy, receiverships, criminal proceedings, usury, taxation, insurance—these are not all of the topics covered. A very useful chapter is the last one, which lists the pitfalls and by cross-reference guides the reader to preceding chapters where each is described in detail. Appendices cite the statutes of each jurisdiction, contain 64 forms of instruments, refer to other books and loose-leaf services and give some very practical suggestions as to how to "run down" a decision.

Book Reviews

The book is intended for both lawyers and laymen. Its keynote may perhaps be found in the author's words, "the best way to get out of trouble is to keep out of it, by complying in the first place with all possible requirements of both local law and practice."

HAROLD DUDLEY GREELEY.

GARAGE ACCOUNTS, by LAWRENCE R. DICKSEE. *Gee & Co., Ltd.*, London. 63 pages.

Webster's dictionary defines a garage as "A place for housing automobiles or an airship or flying machine." Most of us will be inclined to leave the airship or flying machine out of consideration in our popular conception of a garage. The reviewer's notion of a garage, at least in his section of America, is that it is essentially a place for housing or storing automobiles. Other activities may be engaged in, such as repairs or the sale of gasoline and oils, but they are incidental. One learns, however, from reading *Garage Accounts* by Professor Dicksee that the English idea of the term is not at all identical with ours. In fact, accounting for the storage of automobiles is not considered in the book.

In the introduction, the following are described as some of the activities of garages: "(1) car hire, (2) rents of private cars garaged, (3) charges for washing, polishing and greasing customers' cars, (4) repairs to cars, (5) car sales and exchanges, (6) tuition in driving, (7) sales of motor spirits from pumps, (8) sales of motor spirits from tins, (9) sales of lubricants, (10) sales of accessories, (11) sales of tyres, and (12) insurance agency." From this summary of the activities of an English garage, one concludes that the nearest approach to it in America would be a combination of an automobile agency, repair shop, filling station and garage. At all events, the book deals with the English practice relative to accounting in an establishment engaged in all these activities.

The book is practical and the reader is supposed to have a knowledge of the principles of accounting. It is replete with illustrations, both of appropriate mechanical accounting devices and accounting forms.

SIDNEY S. BOURGEOIS.

FOREIGN SECURITIES—PUBLIC AND MORTGAGE BANK BONDS
—AN ANALYSIS OF THE FINANCIAL, LEGAL AND POLITICAL
FACTORS, by JOHN T. MADDEN and MARCUS NADLER. *The Ronald
Press Co.*, New York.

The authors of *Foreign Securities* state that they "have endeavored to keep in mind the need for an introductory treatise on the fundamentals of international finance which would serve equally well the requirements of bankers, investors and students in our colleges and universities." They have restricted themselves to foreign securities of a public character and omitted all discussion of private corporate securities. Chapters XVII-XX deal with mortgage banks, some of which are private corporations, but they are "included because of the close relations which these institutions have with governments and because mortgage-bank securities are often guaranteed by governments."

The book is divided into four parts. Part I presents the theory of international finance, the flow of short-time and long-time funds and its effects on the borrowing and lending countries, the relations that obtain between security values and price movements and the condition of the money and exchange markets. Part II deals with the analytical factors of foreign securities—the methods of underwriting foreign government loans, the negotiation by the banker, the politico-historical or intangible factors and the statistical or tangible factors that affect national credit, the problem of international transfers and the classification of securities, especially internal and external, productive and unproductive, secured and guaranteed loans. Part III discusses the political and legal factors, such as the methods of internal and external foreign loan control, repudiation of debts, defaults and their results, the gold clause and financial intervention. Part IV has an introductory chapter on the general principles of mortgage banking and special chapters on mortgage banks operated on a coöperative basis, those owned and controlled by governments, and specialized types. The book closes with twelve pages of bibliography arranged to fit the chapters of the book. The text abounds in illustrations drawn as largely as possible from American experiences; the phraseology of statutes, court decisions, bonds, treaties, opinions, regulations, etc., is very frequently quoted but with fullness only sufficient to establish the point. These citations enliven the text and give definiteness to the discussion.

The reviewer feels that part I (on the theory of international credit) is the poorest. The theory is not extensively developed, and transition from topic to topic or thought to thought is too brusque. There is also a propensity to make a bald statement which without qualifications strikes the reader as doubtful. Then, later in the text he notes the qualifications. For illustration take the opening sentence: "Capital . . . flows wherever the rate of return is higher . . ." The reader at once takes an antithetical attitude, for he knows exchange rates have been of high importance at least in the short-time movement of capital and he knows that regardless of rates of interest countries must often borrow in a specific country in order to purchase certain needed foreign goods. Or, again, on page 5, it is stated that the liquidation of foreign bonds does not affect the security or the exchange market of the borrowing country, whereas the reader remembers that foreigners tend to purchase their external obligation whenever they appear attractive in other markets and also that stock-exchange prices in Europe vary with flotations of government securities. Or, on page 41, the reader notes that the flotation of foreign bonds does not affect rates of interest in the lending country, whereas he believes the foreign securities are constantly competing with domestic securities in the mind of the investor and consequently large flotations of foreign securities, at rates of interest substantially above the yield on domestic securities, leads bondholders to sell domestic securities in order to buy foreign ones, increasing the supply of domestic bonds, lowering their price and raising their yield. The statistical table on page 41 does not prove that the flotation of foreign securities in the United States has not kept interest rates higher there than they would otherwise have been. On pages 42–43 the method by which foreign loans floated in the United States may indirectly have supported American money rates by preventing a larger inflow of gold is pronounced a logical assumption, and on pages 204–205 Dr. Schacht is approvingly quoted as

saying that the large German borrowings in the United States did not increase American exports to Germany but were to a considerable extent converted into German currency at the reichsbank.

The reviewer feels that the authors were at their best in the chapters on internal and external foreign loan control, the gold clause, repudiation, defaults and financial intervention.

The book is a very commendable product, presenting in clear terms the contemporary factors that influence the present international market, the foreign securities floated in it, and the machinery for handling public security issues. It is not a complete book on international finance for it omits all short-term commercial and banking operations and all foreign private corporate securities.

RAY B. WESTERFIELD.

WAGE INCENTIVE METHODS, by CHARLES WALTER LYTLE. *Ronald Press Company*, New York.

Wage Incentive Methods is a comprehensive review of a great number of plans in present use, or that have been used, as incentives to greater and more effective effort on the part of wage earners. That the subject is not a new one is shown by a quotation the author makes from Xenophon: "But as for men, they may be well persuaded and brought to obedience if a man will show them how it shall be for their profit." The importance of applying this principle is widely recognized. Charles M. Schwab is quoted, "How to measure and relate output and wages on some fair basis has become an important function of management." The possibilities of increased production and decreased cost is shown by the author in his statement that "one of the most astounding facts in economics is that the United States, with the highest wage level in the world, ships rice to China where the wage level is one of the lowest in the world." Some of the benefits of a carefully planned system are revealed by a manager of a large plant who is quoted as stating, "We have increased earnings, we have reduced costs . . . there has been no single case of undue fatigue . . . time wasted is just as tiring, just as fatiguing as time usefully employed." To show the extent of the adoption of such plans, the author gives figures showing that 40% of the industrial workers of the United States are paid on the basis of output instead of on the basis of time.

It must not be thought, however, that any half-considered plan can be hastily installed with any hope of success. The author makes this quite clear in his chapter on the installation of incentive plans. Leaders of the employees must first be won over to a plan and convinced of its advantage to the workers. Wesley C. Mitchell is quoted as follows: "Belief in the economy of high wages has become prevalent among the abler business executives, much as belief in increasing productivity has become prevalent among the abler trade-union leaders." While it is generally supposed that wage incentive methods apply to manual workers or those tending machines, the author shows that it has been successfully applied to the work of the office staff also.

Those contemplating installation of a method having the object of increased productivity in mind would do well to study what Mr. Lytle has to say in favor of and against the many systems which have been tried.

CHARLES E. MATHER.

INDUSTRIAL STOREKEEPING ACCOUNTING AND PERPETUAL INVENTORY, by C. HANNEFORD SMITH, *Gee & Co., Ltd.*, London.

Industrial Storekeeping Accounting and Perpetual Inventory is a very large name for a small volume, consisting of approximately 150 pages. Its purpose is to set forth economies to be effected through the medium of a sound stores-keeping system and inventory control, to the end that losses due to material shortages, pilferage and inventory deficits may be reduced to the minimum.

The book deals with the general adaptability of the stores for quick and easy way of handling; procedure and routine involved in the purchasing; stores routine, accounting and the duties and responsibility of the storekeeper; pricing; perpetual inventory control; and labor-saving devices.

Running through the volume are suggested forms for purchase requisitions, purchase orders, bin cards, stores requisitions, stock-record cards and so forth. The book is written from the British point of view. Fundamentally, however, the methods advocated and the reasons therefor correspond with practice in our own country. The author shows a thorough grasp of his subject and this book is a worth-while addition to accounting literature as a reference book for the public or private accountant.

W. A. MUSGRAVE.

THE BANK AND ITS DIRECTORS, by CRAIG B. HAZLEWOOD. *The Ronald Press Co.*, New York.

The author of *The Bank and Its Directors* is an ex-president of the American Bankers Association, a director of the First National Bank of Chicago, etc., and is not only thoroughly conversant with banks and banking but realizes the difficulties that beset the bank director who, having had no previous connection with the management of a bank, joins the board. He has written a book which is not a textbook but a guide full of information, knowledge, and suggestion.

The first chapter makes the neophyte director aware of his responsibilities and duties and of the type of information that should be before the board. The later chapters deal with the policies that should guide the bank in the management of its funds, loans, etc., and call attention to the evils and risks of one-man managements and also to the inadvisability of going after business in the form of new customers whose accounts do not pay instead of giving all possible service to those customers who are profitable to the bank. The volume closes with a chapter by Thomas B. Paton, general counsel of the American Bankers Association, on the legal duties and responsibilities of bank directors.

The need for such a volume as this may be demonstrated by the fact that in six states over a period of nine years the percentage of bank failures varied from 22% to 45%; in five other states the percentage varied from 0 to 4%. A questionnaire sent to a large number of bankers disclosed the widest variation of views and methods; e.g. the amount of the cash reserves considered advisable varied from 5% to 72% of the bank funds; the interest at 4% on a given savings account varied from \$8.75 to \$37.15, etc.

The book is ably and clearly written and should undoubtedly be in the hands of all bank directors and managers. It will be found to be of interest and value to the public accountant as is any book written by a man who understands business in general and his own business in particular. GEORGE K. HYSLOP.

ACCOUNTING FOR EXECUTIVE CONTROL, by MONARD V. HAYES.
Harper and Brothers, New York. 495 pages.

One can not read *Accounting for Executive Control* without recognizing the thorough grasp Mr. Hayes has of both the theoretical and practical aspects of his subject and appreciating the deep research and orderly thought which his enthusiasm has caused him to devote to this work. Despite all these, however, and despite the natural interest which the subject attracts, the author has somehow failed to produce the outstanding work his equipment would lead us to expect. The outstanding causes for this failure are obviously on the psychological rather than on the scientific side, and are concerned almost entirely with the mode of presentation.

The first mistake was undoubtedly the choice of a title. It is presumed that the author, in writing a book of this type, is to some extent interested in volume of sales. Notwithstanding this, and in spite of all the theoretical advertising knowledge he displays in his chapter on "Accounting as an aid to the publicity manager," in which he has such captions as "Extent and location of the market" and "The habits and traits of consumers," he calls his book *Accounting for Executive Control* and devotes the whole of an early chapter to explaining how he has obviously used the term "accounting" in a far broader and more comprehensive sense than the majority of his potential consumers will. One might almost say, in fact, that the keynote of the whole book is the inadequacy of accounting as generally accepted (referred to as post-mortem accounting), and the need for a broader concept of accounting to include forecasts and standards.

While on the subject of a concept of accounting it is interesting to note one of the views expressed. In quoting it is stated that "The public accountant is not a prophet and he has many limitations that need not hamper the private accountant. The public accountant prefers to deal with accomplished facts and leave the interpretation of these facts to someone else." It hardly seems that those public accountants who are now doing so much advisory work for their clients, and have so altered the type of their work and raised the standard of their profession in this country during the last few years, will allow this statement to go unchallenged. It is not the public accountant, however, with whom Mr. Hayes wishes to deal, for he states that "this treatise will confine itself to some phases of the function of private accounting."

The book's objects are stated to be:

1. To set forth a concept of accounting which may serve management as a basis for "control."
2. To discuss ways and means of setting up certain standards in business by which performance may be directed and appraised, and control of a business may be secured.
3. To discuss ways and means of keeping account of certain business accomplishments in terms of standards.
4. To discuss ways and means for accomplishing the following:
 - (a) To determine causes for variation between standards and actual accomplishment
 - (b) To analyze the causes of variation and interpret them so as to place effectively, responsibility and authority for performance
 - (c) To show how efficiency may be effectively determined for management use
5. To discuss certain organization methods and procedure for the business enterprise, and to show how authority and responsibility may be effectively placed for purposes of control,

The arrangement of the book is indicative of the author's logical mind. In part I the problem is stated under two headings: "The management" and "Concepts of accounting." Following this are part II and part III dealing with "Top organization and control" and "Standards and records control," respectively, and parts III, IV and V dealing with the three broad functions "Marketing control," "Procurement control" and "Labor control." These chapters absorb over three hundred pages of the volume and are typical of the lack of imagination in arrangement. They consist almost entirely of a mass of logical and theoretical discussion in the midst of which are occasional examples and technical illustrations which demonstrate well the author's practical skill. By far the most valuable part of the volume occupies the last hundred pages and consists of a carefully prepared set of practical illustrations in coördinated form. These illustrations, set forth under the name of the Mileage Tire Company, have been prepared by the scientific combination of figures taken from the actual records of three prominent concerns in the rubber industry. Were this section complete in itself, it would carry the rest of the book along with it without difficulty. It is unfortunate, however, that it is, to a certain extent, dependent upon the earlier chapters.

Throughout the whole book there is a decided tendency toward wordiness and repetition, and a failure to appreciate the fact that men of the type who might be expected to read this work would not need a detailed explanation of every minor point used in the arguments. It is extremely doubtful whether, in these days of condensed literature, the busy executive would have either the time or the inclination to wade through this mass of theory to extract the worthwhile practical points which are hidden in its midst.

To the junior student, particularly to the student of management engineering, this volume should prove of considerable interest and its value in this respect is considerably enhanced by the inclusion of an extremely complete bibliography.

HAROLD R. CAFFYN.

Current Literature

Compiled in the Library of the American Institute of Accountants.

[Photostatic reproductions (white printing on a black background) of most of the articles listed in THE JOURNAL OF ACCOUNTANCY or *Accountants' Index* may be obtained from the library of the American Institute of Accountants, 135 Cedar Street, New York, at a rate of 25 cents a page (8½ in. x 11 in.), at 35 cents a page (11½ in. x 14 in.), plus postage. Members and Associates of the American Institute of Accountants are entitled to a discount of 20 per cent. Identify the article by author, title, name of periodical in which it appeared, date of publication and paging. Payment must accompany all orders.]

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WAGES, FEES, ETC.

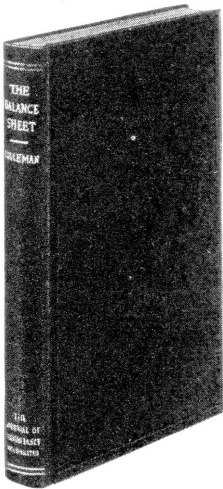
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Freeman, I. H. *Incentive for Key Men and Supervision*. (In National Association of Cost Accountants. Yearbook, 1929, p. 224-8.)

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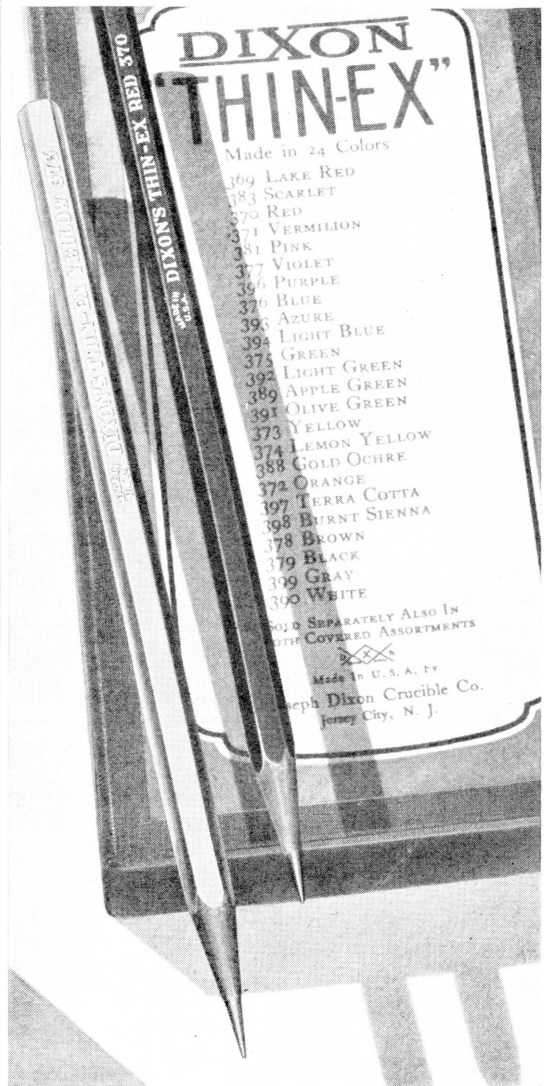
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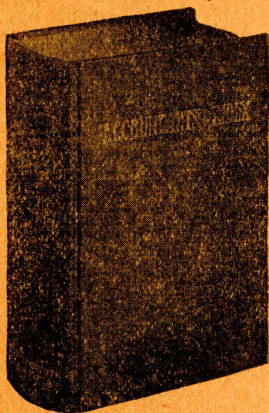
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